

MRID No. 444577-27

DATA EVALUATION RECORD  
S 71-4 -- AVIAN REPRODUCTION TEST1. CHEMICAL: Prohexadione Calcium PC Code No.: 1126002. TEST MATERIAL: Prohexadione-Calcium Purity: 91.1%3. CITATION:Author: R. MunkTitle: Prohexadione-Calcium - 1-Generation Reproduction Study on the Bobwhite Quail (*Colinus virginianus*) by Administration in the DietStudy Completion Date: November 12, 1996Laboratory: BASF Aktiengesellschaft,  
Ludwigshafen/Rhine, GermanySponsor: BASF Corporation, Agricultural Products,  
Research Triangle Park, NCLaboratory Report ID: 96/10868MRID No.: 444577-27DP Barcode: D2456314. REVIEWED BY: Max Feken, M.S., Environmental Toxicologist,  
Golder Associates Inc.Signature:Date: 6/30/98APPROVED BY:Pim Kosalwat, Ph.D., Senior Scientist,  
Golder Associates Inc.Signature:

P. Kosalwat

Date: 6/30/985. APPROVED BY:Signature:

Brad Montague

Date: 7/13/986. STUDY PARAMETERS:Scientific Name of Test Organism: *Colinus virginianus*Age of Test Organisms at Test Initiation: about 9 monthsDefinitive Study Duration: 22 weeks7. CONCLUSIONS: This study is scientifically sound ~~but does not~~ and will meet the guideline requirements for an avian reproduction study using bobwhite quail. When compared to the control, there appeared to be no significant treatment related effects on any of the parameters measured at any concentrations tested (i.e., 100, 500, and 1000 ppm). It is not stated whether the test was conducted with the highest dosage level at or above the maximum field residue level (i.e., the

1.67 lb ai/A = highest application rate on label proposed at this time.

expected concentration on avian food items when treated at recommended label rates).

### **Results Synopsis**

Most sensitive endpoints: None were affected

NOEC: 1000 ppm

LOEC: >1000 ppm

### **8. ADEQUACY OF THE STUDY:**

**A. Classification:** Supplemental

**B. Rationale:** None of the parameters were affected at any test concentrations; however, it is not stated whether the test was conducted with the highest dosage level at or above the maximum field residue level (i.e., the expected concentration on avian food items when treated at recommended label rates).

**C. Repairability:** Yes; if the expected maximum field residue level was 1000 ppm or lower.

### **9. GUIDELINE DEVIATIONS:**

1. Neither the highest test concentration showed any significant effect nor the maximum field residue level was reported.
2. The ambient temperature of the study room was not reported.
3. The schedule for test diet preparation was not reported.

### **10. SUBMISSION PURPOSE:**

### **11. MATERIALS AND METHODS:**

#### **A. Test Organisms**

Guideline Criteria	Reported Information
<u>Species</u> A wild waterfowl species, preferably the mallard ( <i>Anas platyrhynchos</i> ), or an upland game species, preferably the northern bobwhite ( <i>Colinus virginianus</i> )	Northern bobwhite ( <i>Colinus virginianus</i> )

Guideline Criteria	Reported Information
<b>Age at beginning of test</b> Birds should be approaching their first breeding season.	About 9 months old; birds were approaching their first breeding season.
<b>Supplier</b> All birds should be from the same source.	Obtained from H. und E. Kuberich, Quail Breeding, Geesdorf, Germany
<b>Were birds pen-reared?</b>	Not reported
<b>Were birds phenotypically indistinguishable from wild birds?</b>	Yes
<b>Health observation period</b> 2 to 6 weeks.	About 1 month
<b>Were birds healthy and without excessive mortality prior to the test?</b>	Yes

#### B. Test System

Guideline Criteria	Reported Information
<b>Were pens for adult birds of adequate size and designed to conform to good husbandry practices?</b>	Yes
<b>Were pens for chicks of adequate size and designed to conform to good husbandry practices?</b>	Yes
<b>Were pens constructed of a nonbinding material such as galvanized or stainless steel?</b>	Yes
<b>Was adequate ventilation provided?</b>	Yes
<b>Temperature</b> Approx. 21°C (70°F)	Approx. 21 ±2°C
<b>Relative humidity</b> Approx. 55%	Approx. 50 - 60%

Guideline Criteria	Reported Information
<u><b>Lighting</b></u> <u>First 8 weeks:</u> 7 h per day. <u>Thereafter:</u> 16-17 h per day. At least 6 footcandles at bird level.	First 7 weeks: 7 h per day. Week 8-9: 14 h per day Thereafter: 17 h per day. Illumination: 4 - 15 footcandles.
<u><b>Diet</b></u> A commercial breeder feed (or its equivalent) that is appropriate for the test species.	Adults received quail diet manufactured by "Ssniff" "Department for Test Animal Diets", Soest, Germany.  The diet contained: 28% Crude protein 4% Crude fat 3% Calcium 10% Crude ash  Chicks received the same commercial feed as the adults minus the test compound.
<u><b>Preparation of test diet</b></u> A premixed containing the test substance should be mechanically mixed with basal diet. If an evaporative vehicle is used, it must be completely evaporated prior to feeding.	The test material was mixed with basal diet into a premix that was used for preparation of the final diet.
<u>Was the premix stored under conditions which maintain stability?</u>	Yes
<u>Was the diet analyzed to verify homogeneity and stability of the test substance?</u>	Yes
<u><b>Replenishment of feed</b></u>	The dates on which test diets were prepared were not reported.  Feed and water were provided <i>ad libitum</i> for the adults and offspring.

## C. Test Design

Guideline Criteria	Reported Information
<u>Nominal concentrations</u> At least two concentrations other than the control are required; three or more are strongly recommended. The highest test concentrations should show a significant effect or be at or above the maximum field residue level.	Nominal concentrations: Control, 100, 500, and 1000 ppm, not corrected for purity.  Max. field residue level: Not reported.
<u>Control</u> Vehicle control.	Negative control
<u>Vehicle</u> Corn oil or other appropriate vehicle.	No vehicle was used.
<u>Vehicle amount (% of diet by weight)</u> Not more than 2%.	N/A
<u>Number of birds per pen</u> One male and 1 female per pen is strongly recommended. For quail, 1 male and 2 females may be acceptable. For ducks, 2 males and 5 females may be acceptable.	1 male and 1 female per pen
<u>Number of pens per group</u> At least 5 replicate pens are required for mallards housed in groups of 7. For other arrangements, at least 12 pens are required, but considerably more may be needed if birds are kept in pairs.	16 pens per group with 4 additional pens maintained in each group as replacement birds, if necessary, at the end of the pre-egg production period.
<u>Pre-laying exposure duration</u> At least 10 weeks prior to the onset of egg-laying.	10 weeks
<u>Exposure duration with egg-laying</u> At least 10 weeks.	12 weeks

Guideline Criteria	Reported Information
<u>Withdrawal period</u> If reduced reproduction is evident, a withdrawal period of up to 3 weeks may be added to the test phase.	N/A

**D. Egg Collection and Incubation**

Guideline Criteria	Reported Information
<u>Were eggs collected daily?</u>	Yes
<u>Egg storage temperature</u> Approximately 16°C (61°F)	16 ± 2°C
<u>Egg storage humidity</u> Approximately 65%	Approximately 65 - 90%
<u>Were eggs set weekly?</u>	Yes
<u>Were eggs candled for cracks prior to being set for incubation on Day 0?</u>	Yes
<u>Candling for fertility</u> Quail: approx. Day 11 Ducks: approx. Day 14	Eggs were candled on days 11 and 18.
<u>Transfer of eggs to hatcher</u> Bobwhite: Day 21 Mallard: Day 23	Eggs were transferred on Day 22.
<u>Hatching temperature</u> 39°C (102°F) is recommended	37.5 - 38.0°C
<u>Hatching humidity</u> 70% is recommended	Approximately 80 - 90%
<u>Day after egg set that chicks were removed and counted</u> Bobwhite: Day 24 Mallard: Day 27	Chicks that had hatched were removed and counted within 24 hours. All remaining unhatched eggs were classified as "dead-in-shell".

**E. Eggshell Thickness Measurement**

Guideline Criteria	Reported Information
<b>Collection schedule</b> At least once every two weeks (Week 1, 3, 5, 7 and 9).	All eggs laid on one day of weeks 1, 3, 5, 7, 9, and 11 (egg production period) in each replicate were removed for eggshell thickness measurement.
<b>Were shells opened, washed, and air dry for at least 48 hours before measuring?</b>	Yes; shells air dried for at least 48 hours.
<b>Measurement</b> 3-4 measurements per eggs to the nearest 0.01 mm.	4 measurements to the nearest 0.01 mm.

**12. REPORTED RESULTS:**

Guideline Criteria	Reported Information
<b>Quality assurance and GLP compliance statements were included in the report?</b>	The study was conducted in accordance with the GLP-Provisions of the Chemicals ACT ("Bundesgesetzblatt Jahrgang 1994, Teil 1, 29.07.94) and with the OECD Principles of Good Laboratory Practice (Paris, 1981).
<b>Did diet analysis verify the concentrations of test material?</b>	Yes
<b>Did diet analysis show that the test substance was stable and homogeneous?</b>	Yes
<b>Were body weights of adults reported for test initiation and biweekly up to week 8 or the onset of egg laying?</b>	Yes
<b>Was average food consumption of adults reported at least biweekly?</b>	Yes

Guideline Criteria	Reported Information
<p><b><u>Reproductive Endpoints</u></b>  The following endpoints should be reported:</p> <ul style="list-style-type: none"> <li>• Eggs laid</li> <li>• Eggs cracked</li> <li>• Eggs set</li> <li>• Viable embryos</li> <li>• Live 3-week embryos</li> <li>• Normal hatchlings</li> <li>• 14-day-old survivors</li> <li>• Weights of 14-day-old survivors</li> <li>• Egg shell thickness</li> <li>• Total food consumption</li> <li>• Initial and final body weights, by sex</li> </ul>	All endpoints listed at left plus egg weight, early embryonic deaths, dead hatchlings in shell, and hatchling weight.
<p><b>Were data reported by pen for all endpoints?</b></p>	Yes

**Significant Results:** There were no treatment related mortalities or overt signs of toxicity at any test concentration (100, 500 and 1000 ppm). When compared to the control, there were no significant differences in adult bodyweight or feed consumption at any concentration. There were no significant treatment related reductions in any of the reproductive parameters measured at any test concentration when compared to the control.

**13. VERIFIED STATISTICAL RESULTS:****Means of Endpoints**

Endpoint	Control	100 ppm	500 ppm	1000 ppm
Eggs laid (EL)	40 (21)	43 (17)	47 (13)	40 (17)
Eggs cracked (EC)	0.9 (1.2)	1.1 (1.2)	1.1 (1.6)	0.8 (0.8)
Eggs set (ES)	37 (19)	39 (16)	43 (12)	36 (16)
Viable embryos (VE)	33 (18)	35 (14)	34 (13)	31 (16)
Live 3-wk embryos (LE)	32 (17)	35 (14)	33 (13)	31 (15)
Normal hatchlings (NH)	25 (15)	25 (12)	26 (11)	26 (15)
14-day-old survivors (HS)	22 (14)	22 (11)	23 (11)	23 (15)
Egg shell thickness (THICK)	0.196 (0.009)	0.201 (0.010)	0.204 (0.009)	0.197 (0.012)
Hatchling weight (HATWT)	6.3 (0.4)	6.5 (0.5)	6.3 (0.6)	6.6 (0.3)
14-day-old survivor weight (SURVWT)	24.0 (3.8)	25.3 (2.9)	24.4 (1.8)	24.5 (2.6)
Mean food consumption (FOOD)	19.4 (1.9)	20.0 (1.2)	20.0 (1.2)	19.8 (1.0)
Final weight of males (POSTM)	202 (15)	206 (11)	203 (12)	199 (12)
Final weight of females (POSTF)	225 (20)	229 (9)	228 (10)	222 (16)

Statistically Significant Endpoints: No statistically significant effects were observed.

14. **REVIEWER'S COMMENTS:** When compared to the control, there were no treatment related effects on any of the parameters measured at any concentration tested (i.e., 100, 500, and 1000 ppm). The author noted that highest concentration tested was selected based on the "EPA's contemporarily recommended "upper limit" concentration of 1,000 mg/kg." However, it is unclear if the highest dosage level (1000 ppm) was at or above the maximum expected field residue level. This study will be classified as **Supplemental** pending the registrant's response.

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OBS	LEVEL	EL	EC	ES	VE	LE	NH	HS	THICK	HATWT
1	CONTROL	57	0	53	47	47	40	38	0.203	6.43
2	CONTROL	68	0	63	63	60	53	53	0.184	7.04
3	CONTROL	5	0	5	0	0	0	0		
4	CONTROL	24	0	23	22	22	21	21	0.200	6.80
5	CONTROL	7	1	6	3	3	2	1		6.00
6	CONTROL	57	0	54	52	52	45	38	0.203	6.66
7	CONTROL	46	4	41	32	32	23	21	0.190	6.27
8	CONTROL	30	1	26	26	26	25	22	0.177	5.84
9	CONTROL	46	0	46	37	37	26	19		6.34
10	CONTROL	71	1	65	55	53	38	33	0.198	6.34
11	CONTROL	48	1	46	40	40	24	19	0.200	5.92
12	CONTROL	33	2	29	28	28	24	22	0.200	6.23
13	CONTROL	64	3	57	40	39	15	13	0.203	6.28
14	CONTROL	42	0	38	38	38	35	32	0.200	6.17
15	CONTROL	31	0	28	28	28	22	20	0.203	6.93
16	CONTROL	17	2	13	12	12	8	4	0.185	5.73
17	TRT1	47	0	45	36	34	27	21	0.190	6.69
18	TRT1	63	3	56	56	55	40	38	0.195	6.51
19	TRT1	28	1	24	19	19	12	11	0.207	6.91
20	TRT1	57	1	51	50	50	44	39	0.204	6.99
21	TRT1	53	3	48	41	41	25	23	0.200	5.88
22	TRT1	52	2	46	37	37	35	35	0.195	6.87
23	TRT1	60	1	56	46	46	35	28	0.203	6.25
24	TRT1	57	0	54	41	41	25	23	0.180	6.75
25	TRT1	21	0	21	21	21	19	18		7.01
26	TRT1	40	0	39	39	39	38	38	0.200	6.65
27	TRT1	1	0	1	0	0	0	0		
28	TRT1	26	0	24	22	22	21	20	0.210	6.59
29	TRT1	33	1	31	28	27	21	20	0.210	6.06
30	TRT1	53	0	51	46	45	14	9	0.210	5.60

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OBS	LEVEL	EL	EC	ES	VE	LE	NH	HS	THICK	HATWT
31	TRT1	53	3	47	40	40	24	20	0.213	6.22
32	TRT1	41	2	37	35	35	16	10	0.190	5.80
33	TRT2	49	1	44	29	28	25	25	0.195	6.66
34	TRT2	29	0	28	25	25	15	13	0.200	6.61
35	TRT2	55	1	50	49	49	39	30	0.203	5.90
36	TRT2	53	0	52	25	24	19	16	0.200	7.16
37	TRT2	57	0	53	39	38	31	30	0.218	6.03
38	TRT2	55	1	50	30	30	19	17	0.195	6.19
39	TRT2	48	1	45	26	25	12	12	0.205	6.45
40	TRT2	54	0	50	48	48	38	33	0.223	6.15
41	TRT2	59	6	48	43	43	36	31	0.200	6.56
42	TRT2	53	1	49	43	43	29	24	0.213	6.93
43	TRT2	48	0	45	27	27	21	20	0.207	6.54
44	TRT2	36	1	33	17	17	16	16	0.200	6.04
45	TRT2	9	1	7	6	6	5	0	0.190	5.18
46	TRT2	40	4	33	31	31	29	29	0.203	7.41
47	TRT2	59	0	55	54	53	49	45	0.203	6.21
48	TRT2	52	1	48	48	48	30	22	0.210	5.57
49	TRT3	26	2	23	21	21	19	17	0.190	6.53
50	TRT3	31	0	29	27	27	24	20	0.205	6.94
51	TRT3	24	1	21	19	19	14	12	0.190	6.59
52	TRT3	57	0	53	48	48	46	43	0.200	6.75
53	TRT3	59	1	56	52	52	42	41	0.190	6.82
54	TRT3	41	0	37	27	27	19	10	0.195	6.09
55	TRT3	28	1	25	24	24	20	12	0.195	5.75
56	TRT3	70	2	62	59	59	54	52	0.190	7.08
57	TRT3	49	1	45	28	28	12	10	0.193	6.78
58	TRT3	32	0	31	22	22	20	18	0.210	6.70
59	TRT3	36	0	34	34	34	33	25	0.190	6.46
60	TRT3	31	1	29	23	23	23	18	0.210	6.34

OBS SURWT FOOD PREM POSTM PREF POSTF

31	22.3	19.4	197.8	213.9	186.3	227.5
32	23.1	20.8	183.6	202.3	189.4	232.7
33	25.1	19.6	197.1	201.1	196.1	225.7
34	25.2	20.8	196.1	231.1	187.2	228.8
35	20.8	17.6	183.1	180.4	180.0	216.3
36	25.5	19.3	198.0	192.4	188.1	227.2
37	23.6	19.7	201.0	202.5	195.3	242.8
38	26.1	21.3	197.7	213.0	205.9	220.9
39	24.2	19.9	222.4	212.2	202.0	231.0
40	23.4	18.6	192.3	187.1	194.3	228.6
41	23.4	19.2	200.3	211.2	201.3	246.7
42	24.0	19.8	206.4	202.0	192.1	231.2
43	26.4	21.7	209.9	206.5	201.7	243.2
44	26.2	19.4	189.6	197.6	194.9	226.1
45	22.4	19.4	194.9	210.9	190.2	230.1
46	27.5	19.2	196.3	211.7	192.5	215.8
47	22.7	20.0	186.6	201.0	187.1	212.8
48	22.6	20.7	181.5	190.1	186.6	225.0
49	26.7	20.6	192.7	187.8	186.5	203.2
50	25.5	19.6	204.5	197.7	197.8	227.2
51	23.3	18.8	204.7	205.1	198.4	239.3
52	26.1	20.1	182.9	183.4	186.2	227.2
53	22.2	18.5	183.9	186.1	184.1	223.5
54	20.8	21.6	199.9	216.4	185.7	231.4
55	27.1	21.6	208.8	206.5	198.4	216.3
56	28.4	18.8	205.8	208.5	196.4	235.4
57	23.1	19.7	224.8	218.8	209.9	237.0
58	25.5	18.6	191.1	189.6	190.1	208.9
59	21.5	18.5	201.5	206.5	195.9	191.7
60	22.7	21.0	198.3	185.2	189.3	228.1

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OBS	LEVEL	EL	EC	ES	VE	LE	NH	HS	THICK	HATWT
61	TRT3	53	2	48	44	43	39	38	0.183	6.78
62	TRT3	57	1	52	50	49	42	37	0.185	6.69
63	TRT3	0	0	0	0	0	0	0		
64	TRT3	39	1	37	19	18	16	15	0.230	6.44

OBS	SURVWT	FOOD	PREM	POSTM	PREF	POSTF
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61	26.1	20.0	209.6	206.5	204.8	243.9
62	27.4	20.3	197.0	192.6	189.0	226.0
63		19.3	186.2	187.8	187.3	206.6
64	20.6	19.6	180.8	207.8	176.5	198.4

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE

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## LEVEL

CONTROL	TRT1	TRT2	TRT3
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MEAN	MEAN	MEAN	MEAN
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EL	40.38	42.81	47.25	39.56
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EC	0.94	1.06	1.13	0.81
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ES	37.06	39.44	43.13	36.38
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VE	32.69	34.81	33.75	31.06
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LE	32.31	34.50	33.44	30.88
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NH	25.06	24.75	25.81	26.44
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HS	22.25	22.06	22.69	23.00
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ES/EL (%)	91.21	92.86	90.66	91.93
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(EL-EC)/EL (%)	96.73	97.82	97.15	97.78
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VE/ES (%)	82.48	83.31	78.46	84.94
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LE/VE (%)	99.27	99.13	99.02	99.36
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NH/EL (%)	58.38	56.14	54.16	66.45
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NH/ES (%)	64.27	60.60	60.27	72.34
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NH/LE (%)	76.91	72.93	77.19	84.73
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HS/ES (%)	55.53	54.48	49.96	61.33
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HS/NH (%)	83.90	87.49	84.39	84.35
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THICK	0.20	0.20	0.20	0.20
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HATWT	6.33	6.45	6.35	6.58
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SURVWT	23.97	25.35	24.45	24.47
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FOOD	19.36	19.99	19.95	19.79
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POSTM	202.43	206.13	203.18	199.14
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POSTF	225.24	229.16	228.26	221.51
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PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE

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LEVEL=CONTROL

Variable	Label	N	Mean	Std Dev	CV
EL		16	40.375	20.601	51.023
EC		16	0.938	1.237	131.903
ES		16	37.063	19.334	52.165
VE		16	32.688	17.757	54.322
LE		16	32.313	17.235	53.337
NH		16	25.063	14.726	58.758
HS		16	22.250	14.252	64.056
THICK		13	0.196	0.009	4.485
HATWT		15	6.332	0.389	6.150
SURVWT		15	23.973	3.788	15.799
FOOD		16	19.356	1.930	9.970
PREM		16	196.094	11.883	6.060
POSTM		16	202.425	14.597	7.211
PREF		16	191.525	9.850	5.143
POSTF		16	225.244	20.071	8.911
ES_EL	ES/EL (%)	16	91.207	5.799	6.359
NH_EL	NH/EL (%)	16	58.377	24.787	42.460
ENC_EL	(EL-EC)/EL (%)	16	96.730	4.642	4.798
VE_ES	VE/ES (%)	16	82.482	25.798	31.277
NH_ES	NH/ES (%)	16	64.267	26.826	41.741
HS_ES	HS/ES (%)	16	55.529	27.854	50.162
LE_VE	LE/VE (%)	15	99.273	1.564	1.575
NH_LE	NH/LE (%)	15	76.908	15.553	20.223
HS_NH	HS/NH (%)	15	83.900	15.432	18.393

LEVEL=TRT1

Variable	Label	N	Mean	Std Dev	CV
EL		16	42.813	17.034	39.788
EC		16	1.063	1.181	111.196
ES		16	39.438	15.500	39.304
VE		16	34.813	13.953	40.081
LE		16	34.500	13.832	40.094
NH		16	24.750	11.613	46.922
HS		16	22.063	11.416	51.745
THICK		14	0.201	0.010	4.771
HATWT		15	6.452	0.457	7.077
SURVWT		15	25.353	2.868	11.313
FOOD		16	19.994	1.201	6.006
PREM		16	199.100	10.183	5.115
POSTM		16	206.131	10.600	5.142
PREF		16	194.263	9.325	4.800
POSTF		16	229.163	9.411	4.107
ES_EL	ES/EL (%)	16	92.863	4.286	4.616
NH_EL	NH/EL (%)	16	56.141	24.268	43.227
ENC_EL	(EL-EC)/EL (%)	16	97.823	2.270	2.321
VE_ES	VE/ES (%)	16	83.313	23.646	28.382
NH_ES	NH/ES (%)	16	60.599	25.295	41.741
HS_ES	HS/ES (%)	16	54.478	26.387	48.436
LE_VE	LE/VE (%)	15	99.128	1.693	1.708
NH_LE	NH/LE (%)	15	72.927	19.320	26.493
HS_NH	HS/NH (%)	15	87.494	11.748	13.427

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE

10:48 Wednesday, June 24, 1998

LEVEL=TRT2

Variable Label	N	Mean	Std Dev	CV
EL	16	47.250	13.178	27.891
EC	16	1.125	1.628	144.701
ES	16	43.125	12.350	28.637
VE	16	33.750	13.168	39.017
LE	16	33.438	13.155	39.343
NH	16	25.813	11.496	44.537
HS	16	22.688	10.581	46.639
THICK	16	0.204	0.009	4.214
HATWT	16	6.349	0.568	8.940
SURVWT	15	24.447	1.772	7.250
FOOD	16	19.950	1.199	6.012
PREM	16	197.075	10.173	5.162
POSTM	16	203.175	12.306	6.057
PREF	16	193.456	6.929	3.582
POSTF	16	228.263	9.697	4.246
ES EL	ES/EL (%)	90.665	5.489	6.054
NH EL	NH/EL (%)	54.158	15.416	28.466
ENC EL	(EL-EC)/EL (%)	97.148	3.889	4.003
VE ES	VE/ES (%)	78.458	18.442	23.506
NH ES	NH/ES (%)	60.270	18.393	30.518
HS ES	HS/ES (%)	49.957	21.355	42.747
LE VE	LE/VE (%)	99.018	1.576	1.592
NH LE	NH/LE (%)	77.188	13.410	17.373
HS NH	HS/NH (%)	84.386	24.005	28.447

LEVEL=TRT3

Variable Label	N	Mean	Std Dev	CV
EL	16	39.563	17.370	43.906
EC	16	0.813	0.750	92.308
ES	16	36.375	15.882	43.663
VE	16	31.063	15.571	50.129
LE	16	30.875	15.491	50.175
NH	16	26.438	14.629	55.333
HS	16	23.000	14.738	64.077
THICK	15	0.197	0.012	6.228
HATWT	15	6.583	0.338	5.129
SURVWT	15	24.467	2.566	10.486
FOOD	16	19.788	1.036	5.235
PREM	16	198.281	11.749	5.926
POSTM	16	199.144	11.691	5.871
PREF	16	192.269	8.491	4.416
POSTF	16	221.506	15.593	7.040
ES EL	ES/EL (%)	91.925	2.801	3.047
NH EL	NH/EL (%)	66.452	17.364	26.130
ENC EL	(EL-EC)/EL (%)	97.777	2.149	2.198
VE ES	VE/ES (%)	84.941	14.321	16.860
NH ES	NH/ES (%)	72.339	18.866	26.080
HS ES	HS/ES (%)	61.334	19.210	31.320
LE VE	LE/VE (%)	99.364	1.483	1.493
NH LE	NH/LE (%)	84.734	14.133	16.679
HS NH	HS/NH (%)	84.345	13.223	15.677

PRDHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
1. ANALYSIS OF EGGS LAID

\*\*\*\*\*

10:48 Wednesday, June 24, 1998

General Linear Models Procedure  
Class Level Information

Class Levels Values

LEVEL 4 CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 64

PRODHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
1. ANALYSIS OF EGGS LAID

\*\*\*\*\*

10:48 Wednesday, June 24, 1998

General Linear Models Procedure  
Type I Estimable Functions for: LEVEL

Effect Coefficients

INTERCEPT 0

LEVEL CONTROL L2  
TRT1 L3  
TRT2 L4  
TRT3 -L2-L3-L4PRDHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
1. ANALYSIS OF EGGS LAID

\*\*\*\*\*

10:48 Wednesday, June 24, 1998

## General Linear Models Procedure

Dependent Variable: EL

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	572.87500	190.95833	0.64	0.5911
Error	60	17849.12500	297.48542		
Corrected Total	63	18422.00000			
R-Square	C.V.	Root MSE	EL Mean		
0.031097	40.58298	17.248	42.500		

Source	DF	Type I SS	Mean Square	F Value	Pr > F
LEVEL	3	572.87500	190.95833	0.64	0.5911

PRODHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
1. ANALYSIS OF EGGS LAID

\*\*\*\*\*

10:48 Wednesday, June 24, 1998

General Linear Models Procedure  
Least Squares Means

LEVEL	EL	Pr >  T	HO: LSMEAN(i)=LSMEAN(j)	
	LSMEAN	i/j	1 2 3 4	
CONTROL	40.3750000	1	0.6908	0.2641 0.8944
TRT1	42.8125000	2	0.6908	0.4696 0.5960
TRT2	47.2500000	3	0.2641	0.4696 0.2123
TRT3	39.5625000	4	0.8944	0.5960 0.2123

NOTE: To ensure overall protection level, only probabilities associated with pre-planned comparisons should be used.

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
 1. ANALYSIS OF EGGS LAID  
 \*\*\*\*

10:48 Wednesday, June 24, 1998

## General Linear Models Procedure

Tukey's Studentized Range (HSD) Test for variable: EL

NOTE: This test controls the type I experimentwise error rate.

Alpha= 0.05 Confidence= 0.95 df= 60 MSE= 297.4854  
 Critical Value of Studentized Range= 3.737  
 Minimum Significant Difference= 16.114

Comparisons significant at the 0.05 level are indicated by \*\*\*\*.

LEVEL Comparison		Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
TRT2	- TRT1	-11.677	4.438	20.552
TRT2	- CDRNRL	-9.239	6.875	22.989
TRT2	- TRT3	-8.427	7.688	23.802
TRT1	- TRT2	-20.552	-4.438	11.677
TRT1	- CONTROL	-13.677	2.438	18.552
TRT1	- TRT3	-12.864	3.250	19.364
CONTROL	- TRT2	-22.989	-6.875	9.239
CDRNRL	- TRT1	-18.552	-2.438	13.677
CONTROL	- TRT3	-15.302	0.813	16.927
TRT3	- TRT2	-23.802	-7.688	8.427
TRT3	- TRT1	-19.364	-3.250	12.864
TRT3	- CONTROL	-16.927	-0.813	15.302

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
 1. ANALYSIS OF EGGS LAID  
 \*\*\*\*

10:48 Wednesday, June 24, 1998

## General Linear Models Procedure

Dunnett's One-tailed T tests for variable: EL

NOTE: This tests controls the type I experimentwise error for comparisons of all treatments against a control.

Alpha= 0.05 Confidence= 0.95 df= 60 MSE= 297.4854  
 Critical Value of Dunnett's T= 2.104  
 Minimum Significant Difference= 12.83

Comparisons significant at the 0.05 level are indicated by \*\*\*\*.

LEVEL Comparison		Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
TRT2	- CONTROL	-5.955	6.875	19.705
TRT1	- CONTROL	-10.392	2.438	15.267
TRT3	- CONTROL	-13.642	-0.813	12.017

## PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE

## 2. ANALYSIS OF EGGS CRACKED

\*\*\*\*\*  
10:48 Wednesday, June 24, 1998General Linear Models Procedure  
Class Level Information

Class	Levels	Values
LEVEL	4	CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 64

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
 2. ANALYSIS OF EGGS CRACKED  
 \*\*\*\*\*

10:48 Wednesday, June 24, 1998

General Linear Models Procedure  
Type I Estimable Functions for: LEVEL

Effect	Coefficients
INTERCEPT	0
LEVEL	CDRNRL L2 TRT1 L3 TRT2 L4 TRT3 -L2-L3-L4

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
 2. ANALYSIS OF EGGS CRACKED  
 \*\*\*\*\*

10:48 Wednesday, June 24, 1998

## General Linear Models Procedure

Dependent Variable: EC	Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model		3	0.9218750	0.3072917	0.20	0.8958
Error		60	92.0625000	1.5343750		
Corrected Total		63	92.9843750			
	R-Square	C.V.	Root MSE	EC Mean		
	0.009914	125.8361	1.2387	0.9844		
Source	DF	Type I SS	Mean Square	F Value	Pr > F	
LEVEL	3	0.9218750	0.3072917	0.20	0.8958	

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
 2. ANALYSIS OF EGGS CRACKED  
 \*\*\*\*\*

10:48 Wednesday, June 24, 1998

General Linear Models Procedure  
Least Squares Means

LEVEL	EC	Pr >  T	HO: LSMEAN(i)=LSMEAN(j)
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	LSMEAN	i/j	1	2	3	4
CONTROL	0.93750000	1	0.7763	0.6701	0.7763	
TRT1	1.06250000	2	0.7763	0.8870	0.5702	
TRT2	1.12500000	3	0.6701	0.8870	0.4783	
TRT3	0.81250000	4	0.7763	0.5702	0.4783	

NOTE: To ensure overall protection level, only probabilities associated with pre-planned comparisons should be used.

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
2. ANALYSIS OF EGGS CRACKED  
\*\*\*\*\*

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Tukey's Studentized Range (HSD) Test for variable: EC

NOTE: This test controls the type I experimentwise error rate.

Alpha= 0.05 Confidence= 0.95 df= 60 MSE= 1.534375  
Critical Value of Studentized Range= 3.737  
Minimum Significant Difference= 1.1573

Comparisons significant at the 0.05 level are indicated by \*\*\*\*.

LEVEL Comparison	Simultaneous Lower Confidence Limit		Simultaneous Upper Confidence Limit	
	Difference Between Means			
TRT2 - TRT1	-1.0948	0.0625	1.2198	
TRT2 - CONTROL	-0.9698	0.1875	1.3448	
TRT2 - TRT3	-0.8448	0.3125	1.4698	
TRT1 - TRT2	-1.2198	-0.0625	0.9698	
TRT1 - CONTROL	-1.0323	0.1250	1.2823	
TRT1 - TRT3	-0.9073	0.2500	1.4073	
CONTROL - TRT2	-1.3448	-0.1875	0.9698	
CONTROL - TRT1	-1.2823	-0.1250	1.0323	
CONTROL - TRT3	-1.0323	0.1250	1.2823	
TRT3 - TRT2	-1.4698	-0.3125	0.8448	
TRT3 - TRT1	-1.4073	-0.2500	0.9073	
TRT3 - CONTROL	-1.2823	-0.1250	1.0323	

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
2. ANALYSIS OF EGGS CRACKED  
\*\*\*\*\*

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Dunnett's One-tailed T tests for variable: EC

NOTE: This test controls the type I experimentwise error for comparisons of all treatments against a control.

Alpha= 0.05 Confidence= 0.95 df= 60 MSE= 1.534375  
Critical Value of Dunnett's T= 2.104  
Minimum Significant Difference= 0.9214

Comparisons significant at the 0.05 level are indicated by \*\*\*\*.

Simultaneous Simultaneous

LEVEL Comparison	Lower Confidence Limit	Difference Between Means	Upper Confidence Limit
TRT2 - CONTROL	-0.7339	0.1875	1.1089
TRT1 - CONTROL	-0.7964	0.1250	1.0464
TRT3 - CONTROL	-1.0464	-0.1250	0.7964

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
3. ANALYSIS OF EGGS SET  
\*\*\*\*\*

10:48 Wednesday, June 24, 1998

General Linear Models Procedure  
Class Level Information

Class	Levels	Values
LEVEL	4	CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 64

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
3. ANALYSIS OF EGGS SET  
\*\*\*\*\*

10:48 Wednesday, June 24, 1998

General Linear Models Procedure  
Type I Estimable Functions for: LEVEL

Effect	Coefficients
INTERCEPT	0
LEVEL	CONTROL L2 TRT1 L3 TRT2 L4 TRT3 -L2-L3-L4

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
3. ANALYSIS OF EGGS SET  
\*\*\*\*\*

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Dependent Variable: ES	Sum of Squares	Mean Square	F Value	Pr > F
Source	DF			
Model	3	445.62500	148.54167	0.58
Error	60	15282.37500	254.70625	
Corrected Total	63	15728.00000		

R-Square	C.V.	Root MSE	ES Mean		
0.028333	40.92184	15.960	39.000		
Source	DF	Type I SS	Mean Square	F Value	Pr > F
LEVEL	3	445.62500	148.54167	0.58	0.6283

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
 3. ANALYSIS OF EGGS SET  
 \*\*\*\*

10:48 Wednesday, June 24, 1998

General Linear Models Procedure  
 Least Squares Means

LEVEL	ES	Pr >  T	H0: LSMEAN(i)=LSMEAN(j)			
			i/j	1	2	3
CONTROL	37.0625000	1	0.6753	0.2869	0.9034	
TRT1	39.4375000	2	0.6753	-	0.5159	0.5893
TRT2	43.1250000	3	0.2869	0.5159	-	0.2363
TRT3	36.3750000	4	0.9034	0.5893	0.2363	-

NOTE: To ensure overall protection level, only probabilities associated with pre-planned comparisons should be used.

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
 3. ANALYSIS OF EGGS SET  
 \*\*\*\*

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Tukey's Studentized Range (HSD) Test for variable: ES

NOTE: This test controls the type I experimentwise error rate.

Alpha= 0.05 Confidence= 0.95 df= 60 MSE= 254.7063  
 Critical Value of Studentized Range= 3.737  
 Minimum Significant Difference= 14.911

Comparisons significant at the 0.05 level are indicated by \*\*\*\*.

LEVEL Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit	
			TRT2 - TRT1	TRT2 - CONTROL
TRT2 - TRT1	-11.223	3.688	18.598	
TRT2 - CONTROL	-8.848	6.063	20.973	
TRT2 - TRT3	-8.161	6.750	21.661	
TRT1 - TRT2	-18.598	-3.688	11.223	
TRT1 - CONTROL	-12.536	2.375	17.286	
TRT1 - TRT3	-11.848	3.063	17.973	
CONTROL - TRT2	-20.973	-6.063	8.848	
CONTROL - TRT1	-17.286	-2.375	12.536	
CONTROL - TRT3	-14.223	0.688	15.598	
TRT3 - TRT2	-21.661	-6.750	8.161	
TRT3 - TRT1	-17.973	-3.063	11.848	
TRT3 - CONTROL	-15.598	-0.688	14.223	

PRDHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
 3. ANALYSIS OF EGGS SET  
 \*\*\*\*

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Dunnett's One-tailed T tests for variable: ES

File:44457727.sas Page 12  
 NOTE: This tests controls the type I experimentwise error for  
 comparisons of all treatments against a control.

Alpha= 0.05 Confidence= 0.95 df= 60 MSE= 254.7063  
 Critical Value of Dunnett's T= 2.104  
 Minimum Significant Difference= 11.871

Comparisons significant at the 0.05 level are indicated by \*\*\*\*.

LEVEL Comparison	Simultaneous Lower Confidence Limit	Simultaneous Difference Between Means		Simultaneous Upper Confidence Limit
		TRT2 - CONTROL	TRT1 - CONTROL	
TRT2 - CONTROL	-5.809	6.063	17.934	
TRT1 - CONTROL	-9.496	2.375	14.246	
TRT3 - CONTROL	-12.559	-0.688	11.184	

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
 4. ANALYSIS OF VIABLE EMBRYOS  
 \*\*\*\*

10:48 Wednesday, June 24, 1998

General Linear Models Procedure  
 Class Level Information

Class	Levels	Values
LEVEL	4	CONTRDL TRT1 TRT2 TRT3

Number of observations in data set = 64

PRDHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
 4. ANALYSIS OF VIABLE EMBRYOS  
 \*\*\*\*

10:48 Wednesday, June 24, 1998

General Linear Models Procedure  
 Type I Estimable Functions for: LEVEL

Effect	Coefficients
INTERCEPT	0

LEVEL	CONTROL	L2
TRT1		L3
TRT2		L4
TRT3		-L2-L3-L4

PROHEXADIONE-CALCIUM: REPRD. STUDY WITH THE BOBWHITE  
 4. ANALYSIS OF VIABLE EMBRYDS  
 \*\*\*\*

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Dependent Variable: VE	Sum of Squares	Mean Square	F Value	Pr > F
Source	DF			
Model	3	122.79688	40.93229	0.18
Error	60	13887.81250	231.46354	
Corrected Total	63	14010.60938		

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R-Square

	C.V.	Root MSE	VE Mean
	0.008765	45.99392	15.214
			33.078

Source DF Type I SS Mean Square F Value Pr > F  
LEVEL 3 122.79688 40.93229 0.18 0.9117

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
4. ANALYSIS OF Viable EMBRYOS  
\*\*\*\*\*  
10:48 Wednesday, June 24, 1998

General Linear Models Procedure  
Least Squares Means

LEVEL	LSMEAN	Pr >  T	HD: LSMEAN(i)=LSMEAN(j)				
			i/j	1	2	3	4
CONTROL	32.6875000	1		0.6942	0.8441	0.7636	
TRT1	34.8125000	2	0.6942		0.8441	0.4884	
TRT2	33.7500000	3	0.8441	0.8441		0.6192	
TRT3	31.0625000	4	0.7636	0.4884	0.6192		

NOTE: To ensure overall protection level, only probabilities associated with pre-planned comparisons should be used.

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
4. ANALYSIS OF Viable EMBRYOS  
\*\*\*\*\*  
10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Tukey's Studentized Range (HSD) Test for variable: VE

NOTE: This test controls the type I experimentwise error rate.

Alpha= 0.05 Confidence= 0.95 df= 60 MSE= 231.4635  
Critical Value of Studentized Range= 3.737  
Minimum Significant Difference= 14.214

Comparisons significant at the 0.05 level are indicated by \*\*\*\*.

LEVEL Comparison	Simultaneous Lower Confidence Limit		Simultaneous Upper Confidence Limit	
	Difference	Between Means	Difference	Between Means
TRT1 - TRT2	-13.151	1.063	15.276	
TRT1 - CONTROL	-12.089	2.125	16.339	
TRT1 - TRT3	-10.464	3.750	17.964	
TRT2 - TRT1	-15.276	-1.063	13.151	
TRT2 - CONTROL	-13.151	1.063	15.276	
TRT2 - TRT3	-11.526	2.688	16.901	
CONTROL - TRT1	-16.339	-2.125	12.089	
CONTROL - TRT2	-15.276	-1.063	13.151	
CONTROL - TRT3	-12.589	1.625	15.839	
TRT3 - TRT1	-17.964	-3.750	10.464	
TRT3 - TRT2	-16.901	-2.688	11.526	
TRT3 - CONTROL	-15.839	-1.625	12.589	

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PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
4. ANALYSIS OF Viable EMBRYOS  
\*\*\*\*\*

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Dunnett's One-tailed T tests for variable: VE

NOTE: This tests controls the type I experimentwise error for comparisons of all treatments against a control.

Alpha= 0.05 Confidence= 0.95 df= 60 MSE= 231.4635  
Critical Value of Dunnett's T= 2.104  
Minimum Significant Difference= 11.317

Comparisons significant at the 0.05 level are indicated by \*\*\*\*.

LEVEL Comparison	Simultaneous Lower Confidence Limit		Simultaneous Upper Confidence Limit	
	Between Means	Confidence Limit	Between Means	Confidence Limit
TRT1 - CONTROL	-9.192	2.125	13.442	
TRT2 - CONTROL	-10.254	1.063	12.379	
TRT3 - CONTROL	-12.942	-1.625	9.692	

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
5. ANALYSIS OF LIVE 3-WEEK EMBRYOS  
\*\*\*\*\*

10:48 Wednesday, June 24, 1998

General Linear Models Procedure  
Class Level Information

Class	Levels	Values
LEVEL	4	CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 64

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
5. ANALYSIS OF LIVE 3-WEEK EMBRYOS  
\*\*\*\*\*

10:48 Wednesday, June 24, 1998

General Linear Models Procedure  
Type I Estimable Functions for: LEVEL

Effect	Coefficients			
INTERCEPT	0			
LEVEL	CONTROL L2 TRT1 L3 TRT2 L4 TRT3 -L2-L3-L4			

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
5. ANALYSIS OF LIVE 3-WEEK EMBRYOS  
\*\*\*\*\*

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

File:44457727.sas Page 15  
Dependent Variable: LE

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	115.81250	38.60417	0.17	0.9154
Error	60	13521.12500	225.35208		
Corrected Total	63	13636.93750			
	R-Square	C.V.	Root MSE	LE Mean	
	0.008493	45.79365	15.012	32.781	
Source	DF	Type I SS	Mean Square	F Value	Pr > F
LEVEL	3	115.81250	38.60417	0.17	0.9154

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
5. ANALYSIS OF LIVE 3-WEEK EMBRYOS

\*\*\*\*\*  
10:48 Wednesday, June 24, 1998

General Linear Models Procedure  
Least Squares Means

LEVEL	LE	Pr >  T	HO: LSMEAN(i)=LSMEAN(j)				
			i/j	1	2	3	4
CONTROL	32.3125000	1	0.6817	0.8329	0.7874		
TRT1	34.5000000	2	0.6817	0.8420	0.4972		
TRT2	33.4375000	3	0.8329	0.8420	0.6310		
TRT3	30.8750000	4	0.7874	0.4972	0.6310		

NOTE: To ensure overall protection level, only probabilities associated with pre-planned comparisons should be used.

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
5. ANALYSIS OF LIVE 3-WEEK EMBRYOS

\*\*\*\*\*  
10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Tukey's Studentized Range (HSD) Test for variable: LE

NOTE: This test controls the type I experimentwise error rate.

Alpha= 0.05 Confidence= 0.95 df= 60 MSE= 225.3521  
Critical Value of Studentized Range= 3.737  
Minimum Significant Difference= 14.025

Comparisons significant at the 0.05 level are indicated by \*\*\*\*.

LEVEL Comparison	Simultaneous Lower Confidence Limit		Simultaneous Difference Between Means		Upper Confidence Limit	
	TRT1	- TRT2	TRT1	- CONTROL	TRT1	- TRT3
TRT1	- TRT2	-12.963	1.063	15.088		
TRT1	- CONTROL	-11.838	2.188	16.213		
TRT1	- TRT3	-10.400	3.625	17.650		
TRT2	- TRT1	-15.088	-1.063	12.963		
TRT2	- CONTROL	-12.900	1.125	15.150		

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File:44457727.sas Page 16	TRT2 - TRT3	-11.463	2.563	16.588
CONTROL - TRT1	-16.213	-2.188	11.838	
CONTROL - TRT2	-15.150	-1.125	12.900	
CONTROL - TRT3	-12.588	1.438	15.463	
TRT3 - TRT1	-17.650	-3.625	10.400	
TRT3 - TRT2	-16.588	-2.563	11.463	
TRT3 - CONTROL	-15.463	-1.438	12.588	

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
5. ANALYSIS OF LIVE 3-WEEK EMBRYOS

\*\*\*\*\*  
10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Dunnett's One-tailed T tests for variable: LE

NOTE: This tests controls the type I experimentwise error for comparisons of all treatments against a control.

Alpha= 0.05 Confidence= 0.95 df= 60 MSE= 225.3521  
Critical Value of Dunnett's T= 2.104  
Minimum Significant Difference= 11.166

Comparisons significant at the 0.05 level are indicated by \*\*\*\*.

LEVEL Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit		
			TRT1 - CONTROL	TRT2 - CONTROL	TRT3 - CONTROL
TRT1	-8.979	2.188	13.354		
TRT2	-10.041	1.125	12.291		
TRT3	-12.604	-1.438	9.729		

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
6. ANALYSIS OF NORMAL HATCHLINGS

\*\*\*\*\*  
10:48 Wednesday, June 24, 1998

General Linear Models Procedure  
Class Level Information

Class	Levels	Values
LEVEL	4	CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 64

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
6. ANALYSIS OF NORMAL HATCHLINGS

\*\*\*\*\*  
10:48 Wednesday, June 24, 1998

General Linear Models Procedure  
Type I Estimable Functions for: LEVEL

Effect	Coefficients
INTERCEPT	0
LEVEL	CONTROL L2 TRT1 L3

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TRT2 L4  
TRT3 -L2-L3-L4

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE

6. ANALYSIS OF NORMAL HATCHLINGS

\*\*\*\*\*

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Dependent Variable: NH

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
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Model	3	27.671875	9.223958	0.05	0.9838
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Error	60	10468.31250	174.471875		
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Corrected Total	63	10495.98438			
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R-Square	C.V.	Root MSE	NH Mean
0.002636	51.76742	13.209	25.516

Source	DF	Type I SS	Mean Square	F Value	Pr > F
--------	----	-----------	-------------	---------	--------

LEVEL	3	27.671875	9.223958	0.05	0.9838
-------	---	-----------	----------	------	--------

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE

6. ANALYSIS OF NORMAL HATCHLINGS

\*\*\*\*\*

10:48 Wednesday, June 24, 1998

General Linear Models Procedure  
Least Squares Means

LEVEL	NH	Pr >  T	HO: LSMEAN(i)=LSMEAN(j)			
			i/j	1	2	3
CONTROL	25.0625000	1	0.9469	0.8729	0.7694	
TRT1	24.7500000	2	0.9469	0.8208	0.7191	
TRT2	25.8125000	3	0.8729	0.8208	0.8940	
TRT3	26.4375000	4	0.7694	0.7191	0.8940	

NOTE: To ensure overall protection level, only probabilities associated with pre-planned comparisons should be used.

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE

6. ANALYSIS OF NORMAL HATCHLINGS

\*\*\*\*\*

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Tukey's Studentized Range (HSD) Test for variable: NH

NOTE: This test controls the type I experimentwise error rate.

Alpha= 0.05 Confidence= 0.95 df= 60 MSE= 174.4719

Critical Value of Studentized Range= 3.737

Minimum Significant Difference= 12.341

Comparisons significant at the 0.05 level are indicated by '\*\*\*'.

Simultaneous Simultaneous

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LEVEL Comparison	Lower Confidence Limit	Difference Between Means	Upper Confidence Limit
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TRT3 - TRT2	-11.716	0.625	12.966
TRT3 - CONTROL	-10.966	1.375	13.716
TRT3 - TRT1	-10.653	1.688	14.028

TRT2 - TRT3	-12.966	-0.625	11.716
TRT2 - CONTROL	-11.591	0.750	13.091
TRT2 - TRT1	-11.278	1.063	13.403

CONTROL - TRT3	-13.716	-1.375	10.966
CONTROL - TRT2	-13.091	-0.750	11.591
CONTROL - TRT1	-12.028	0.313	12.653

TRT1 - TRT3	-14.028	-1.688	10.653
TRT1 - TRT2	-13.403	-1.063	11.278
TRT1 - CONTROL	-12.653	-0.313	12.028

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE

6. ANALYSIS OF NORMAL HATCHLINGS

\*\*\*\*\*

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Dunnett's One-tailed T tests for variable: NH

NOTE: This tests controls the type I experimentwise error for comparisons of all treatments against a control.

Alpha= 0.05 Confidence= 0.95 df= 60 MSE= 174.4719  
Critical Value of Dunnett's T= 2.104  
Minimum Significant Difference= 9.8253

Comparisons significant at the 0.05 level are indicated by '\*\*\*'.

LEVEL Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
------------------	-------------------------------------	--------------------------	-------------------------------------

TRT3 - CONTROL	-8.450	1.375	11.200
TRT2 - CONTROL	-9.075	0.750	10.575
TRT1 - CONTROL	-10.138	-0.313	9.513

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE

7. ANALYSIS OF 14-DAY-OLD SURVIVORS

\*\*\*\*\*

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Class Level Information

Class	Levels	Values
-------	--------	--------

LEVEL	4	CONTROL TRT1 TRT2 TRT3
-------	---	------------------------

Number of observations in data set = 64

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE

7. ANALYSIS OF 14-DAY-OLD SURVIVORS

\*\*\*\*\*

10:48 Wednesday, June 24, 1998

General Linear Models Procedure  
Type I Estimable Functions for: LEVEL

Effect Coefficients

INTERCEPT 0

LEVEL CONTROL L2  
TRT1 L3  
TRT2 L4  
TRT3 -L2-L3-L4

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
7. ANALYSIS OF 14-DAY-OLD SURVIVORS

\*\*\*\*\*  
10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Dependent Variable: HS

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	8.6250000	2.8750000	0.02	0.9969
Error	60	9939.375000	165.6562500		
Corrected Total	63	9948.000000			

R-Square	C.V.	Root MSE	HS Mean
0.000867	57.20334	12.871	22.500

Source	DF	Type I SS	Mean Square	F Value	Pr > F
LEVEL	3	8.6250000	2.8750000	0.02	0.9969

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
7. ANALYSIS OF 14-DAY-OLD SURVIVORS

\*\*\*\*\*  
10:48 Wednesday, June 24, 1998

General Linear Models Procedure  
Least Squares Means

LEVEL	HS	Pr >  T	H0: LSMEAN(i)=LSMEAN(j)
	LSMEAN	i/j	1 2 3 4
CONTROL	22.2500000	1	0.9673 0.9237 0.8696
TRT1	22.0625000	2	0.9673 0.8912 0.8375
TRT2	22.6875000	3	0.9237 0.8912 0.9455
TRT3	23.0000000	4	0.8696 0.8375 0.9455

NOTE: To ensure overall protection level, only probabilities associated with pre-planned comparisons should be used.

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
7. ANALYSIS OF 14-DAY-OLD SURVIVORS

\*\*\*\*\*  
10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Tukey's Studentized Range (HSD) Test for variable: HS

NOTE: This test controls the type I experimentwise error rate.

Alpha= 0.05 Confidence= 0.95 df= 60 MSE= 165.6563  
Critical Value of Studentized Range= 3.737  
Minimum Significant Difference= 12.025

Comparisons significant at the 0.05 level are indicated by \*\*\*\*.

LEVEL Comparison		Simultaneous	Difference Between Means	Simultaneous
		Lower Confidence Limit		Upper Confidence Limit
TRT3	- TRT2	-11.7123	0.3125	12.3373
TRT3	- CONTROL	-11.2748	0.7500	12.7748
TRT3	- TRT1	-11.0873	0.9375	12.9623
TRT2	- TRT3	-12.3373	-0.3125	11.7123
TRT2	- CONTROL	-11.5873	0.4375	12.4623
TRT2	- TRT1	-11.3998	0.6250	12.6498
CONTROL	- TRT3	-12.7748	-0.7500	11.2748
CONTROL	- TRT2	-12.4623	-0.4375	11.5873
CONTROL	- TRT1	-11.8373	0.1875	12.2123
TRT1	- TRT3	-12.9623	-0.9375	11.0873
TRT1	- TRT2	-12.6498	-0.6250	11.3998
TRT1	- CONTROL	-12.2123	-0.1875	11.8373

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
7. ANALYSIS OF 14-DAY-OLD SURVIVORS

\*\*\*\*\*  
10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Dunnett's One-tailed T tests for variable: HS

NOTE: This tests controls the type I experimentwise error for comparisons of all treatments against a control.

Alpha= 0.05 Confidence= 0.95 df= 60 MSE= 165.6563  
Critical Value of Dunnett's T= 2.104  
Minimum Significant Difference= 9.5739

Comparisons significant at the 0.05 level are indicated by \*\*\*\*.

LEVEL Comparison		Simultaneous	Difference Between Means	Simultaneous
		Lower Confidence Limit		Upper Confidence Limit
TRT3	- CONTROL	-8.8239	0.7500	10.3239
TRT2	- CONTROL	-9.1364	0.4375	10.0114
TRT1	- CONTROL	-9.7614	-0.1875	9.3864

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
8. ANALYSIS OF EGGS SET/EGGS LAID

\*\*\*\*\*  
10:48 Wednesday, June 24, 1998

General Linear Models Procedure  
Class Level Information

Class Levels Values

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LEVEL 4 CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 64

NOTE: Due to missing values, only 63 observations can be used in this analysis.

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
8. ANALYSIS OF EGGS SET/EGGS LAID  
\*\*\*\*\*

10:48 Wednesday, June 24, 1998

General Linear Models Procedure  
Type I Estimable Functions for: LEVEL

Effect Coefficients

INTERCEPT 0

LEVEL CONTROL L2  
TRT1 L3  
TRT2 L4  
TRT3 -L2-L3-L4PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
8. ANALYSIS OF EGGS SET/EGGS LAID  
\*\*\*\*\*

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Dependent Variable: RESPONSE

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	74.952420	24.984140	0.73	0.5405
Error	59	2030.207199	34.410292		
Corrected Total	62	2105.159619			

	R-Square	C.V.	Root MSE	RESPONSE Mean
	0.035604	7.913877	5.8660	74.123

Source	DF	Type I SS	Mean Square	F Value	Pr > F
LEVEL	3	74.952420	24.984140	0.73	0.5405

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
8. ANALYSIS OF EGGS SET/EGGS LAID  
\*\*\*\*\*

10:48 Wednesday, June 24, 1998

General Linear Models Procedure  
Least Squares Means

LEVEL	RESPONSE	Pr >  T	H0: LSMEAN(i)=LSMEAN(j)	i/j	1	2	3	4
CONTROL	74.1893687	1	0.4456	0.5045	0.8169			
TRT1	75.7819226	2	0.4456	0.1553	0.3272			
TRT2	72.7965378	3	0.5045	0.1553	0.6702			
TRT3	73.6989299	4	0.8169	0.3272	0.6702			

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NOTE: To ensure overall protection level, only probabilities associated with pre-planned comparisons should be used.

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
8. ANALYSIS OF EGGS SET/EGGS LAID  
\*\*\*\*\*

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Tukey's Studentized Range (HSD) Test for variable: RESPONSE

NOTE: This test controls the type I experimentwise error rate.

Alpha= 0.05 Confidence= 0.95 df= 59 MSE= 34.41029  
Critical Value of Studentized Range= 3.739

Comparisons significant at the 0.05 level are indicated by \*\*\*\*.

		Simultaneous Lower Difference Simultaneous
		Confidence Between Upper
LEVEL Comparison		Limit Means Confidence Limit
TRT1	- CONTROL	-3.891 1.593 7.076
TRT1	- TRT3	-3.491 2.083 7.657
TRT1	- TRT2	-2.498 2.985 8.468
CONTROL	- TRT1	-7.076 -1.593 3.891
CONTROL	- TRT3	-5.083 0.490 6.064
CONTROL	- TRT2	-4.090 1.393 6.876
TRT3	- TRT1	-7.657 -2.083 3.491
TRT3	- CONTROL	-6.064 -0.490 5.083
TRT3	- TRT2	-4.671 0.902 6.476
TRT2	- TRT1	-8.468 -2.985 2.498
TRT2	- CONTROL	-6.876 -1.393 4.090
TRT2	- TRT3	-6.476 -0.902 4.671

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
8. ANALYSIS OF EGGS SET/EGGS LAID  
\*\*\*\*\*

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Dunnett's One-tailed T tests for variable: RESPONSE

NOTE: This test controls the type I experimentwise error for comparisons of all treatments against a control.

Alpha= 0.05 Confidence= 0.95 df= 59 MSE= 34.41029  
Critical Value of Dunnett's T= 2.106

Comparisons significant at the 0.05 level are indicated by \*\*\*\*.

		Simultaneous Lower Difference Simultaneous
		Confidence Between Upper
LEVEL Comparison		Limit Means Confidence Limit
TRT1	- CONTROL	-2.775 1.593 5.960
TRT3	- CONTROL	-4.930 -0.490 3.949
TRT2	- CONTROL	-5.760 -1.393 2.975

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
 9. ANALYSIS OF VIABLE EMBRYOS/EGGS SETS  
 \*\*\*\*

10:48 Wednesday, June 24, 1998

General Linear Models Procedure  
 Class Level Information

Class	Levels	Values
LEVEL	4	CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 64

NOTE: Due to missing values, only 63 observations can be used in this analysis.

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
 9. ANALYSIS OF VIABLE EMBRYOS/EGGS SETS  
 \*\*\*\*

10:48 Wednesday, June 24, 1998

General Linear Models Procedure  
 Type I Estimable Functions for: LEVEL

Effect	Coefficients
--------	--------------

INTERCEPT 0

LEVEL	CONTROL	L2
	TRT1	L3
	TRT2	L4
	TRT3	-L2-L3-L4

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
 9. ANALYSIS OF VIABLE EMBRYOS/EGGS SETS  
 \*\*\*\*

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Dependent Variable: RESPONSE

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	181.39820	60.46607	0.19	0.9061
Error	59	19270.56141	326.61968		

Corrected Total 62 19451.95960

R-Square	C.V.	Root MSE	RESPONSE Mean
0.009325	26.59850	18.073	67.946

Source	DF	Type I SS	Mean Square	F Value	Pr > F
LEVEL	3	181.39820	60.46607	0.19	0.9061

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
 9. ANALYSIS OF VIABLE EMBRYOS/EGGS SETS  
 \*\*\*\*

10:48 Wednesday, June 24, 1998

General Linear Models Procedure  
 Least Squares Means

LEVEL	RESPONSE LSMEAN	Pr >  T  H0: LSMEAN(i)=LSMEAN(j)	i/j	1	2	3	4
CONTROL	68.9626746	1	0.9379	0.5466	0.9516		
TRT1	68.4630269	2	0.9379	0.5994	0.8908		
TRT2	65.0882937	3	0.5466	0.5994	0.5135		
TRT3	69.3583109	4	0.9516	0.8908	0.5135		

NOTE: To ensure overall protection level, only probabilities associated with pre-planned comparisons should be used.

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
 9. ANALYSIS OF VIABLE EMBRYOS/EGGS SETS  
 \*\*\*\*

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Tukey's Studentized Range (HSD) Test for variable: RESPONSE

NOTE: This test controls the type I experimentwise error rate.

Alpha= 0.05 Confidence= 0.95 df= 59 MSE= 326.6197  
 Critical Value of Studentized Range= 3.739

Comparisons significant at the 0.05 level are indicated by \*\*\*\*.

LEVEL Comparison	Simultaneous Lower Confidence Limit		Simultaneous Upper Confidence Limit	
	Between Means	Difference	Between Means	Difference
TRT3 - CNTROL	-16.776	0.396	17.568	
TRT3 - TRT1	-16.277	0.895	18.067	
TRT3 - TRT2	-12.902	4.270	21.442	
CONTROL - TRT3	-17.568	-0.396	16.776	
CONTROL - TRT1	-16.393	0.500	17.393	
CONTROL - TRT2	-13.018	3.874	20.767	
TRT1 - TRT3	-18.067	-0.895	16.277	
TRT1 - CNTROL	-17.393	-0.500	16.393	
TRT1 - TRT2	-13.518	3.375	20.268	
TRT2 - TRT3	-21.442	-4.270	12.902	
TRT2 - CNTROL	-20.767	-3.874	13.018	
TRT2 - TRT1	-20.268	-3.375	13.518	

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
 9. ANALYSIS OF VIABLE EMBRYOS/EGGS SETS  
 \*\*\*\*

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Dunnett's One-tailed T tests for variable: RESPONSE

NOTE: This tests controls the type I experimentwise error for comparisons of all treatments against a control.

Alpha= 0.05 Confidence= 0.95 df= 59 MSE= 326.6197  
 Critical Value of Dunnett's T= 2.106

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Comparisons significant at the 0.05 level are indicated by \*\*\*\*.

LEVEL Comparison	Simultaneous Lower Confidence Limit		Difference Between Means	Simultaneous Upper Confidence Limit	
	TRT3 - CDNTRDL	-13.283	0.396	14.074	
TRT1 - CDNTRDL	-13.956	-0.500	12.957		
TRT2 - CONTROL	-17.331	-3.874	9.582		

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
10. ANALYSIS OF LIVE 3-WEEK EMBRYOS/VIABLE EMBRYOS\*\*\*\*\*  
10:48 Wednesday, June 24, 1998General Linear Models Procedure  
Class Level InformationClass Levels Values  
LEVEL 4 CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 64

NOTE: Due to missing values, only 61 observations can be used in this analysis.

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
10. ANALYSIS OF LIVE 3-WEEK EMBRYOS/VIABLE EMBRYOS\*\*\*\*\*  
10:48 Wednesday, June 24, 1998General Linear Models Procedure  
Type I Estimable Functions for: LEVEL

Effect Coefficients

INTERCEPT 0

LEVEL CONTROL L2  
TRT1 L3  
TRT2 L4  
TRT3 -L2-L3-L4PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
10. ANALYSIS OF LIVE 3-WEEK EMBRYOS/VIABLE EMBRYOS\*\*\*\*\*  
10:48 Wednesday, June 24, 1998

## General Linear Models Procedure

Dependent Variable: RESPONSE

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	12.854968	4.284989	0.20	0.8974
Error	57	1233.884948	21.647104		
Corrected Total	60	1246.739916			
R-Square	C.V.	Root MSE	RESPONSE Mean		
0.010311	5.320971	4.6526	87.440		

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Source DF Type I SS Mean Square F Value Pr > F  
LEVEL 3 12.854968 4.284989 0.20 0.8974PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
10. ANALYSIS OF LIVE 3-WEEK EMBRYOS/VIABLE EMBRYOS\*\*\*\*\*  
10:48 Wednesday, June 24, 1998General Linear Models Procedure  
Least Squares Means

LEVEL	RESPONSE LSMEAN	Pr >  T  i/j	H0: LSMEAN(i)=LSMEAN(j)	1	2	3	4
CONTROL	87.7849986	1	0.7551	0.5596	0.9181		
TRT1	87.2525760	2	0.7551	0.7893	0.6785		
TRT2	86.8035531	3	0.5596	0.7893	0.4919		
TRT3	87.9603627	4	0.9181	0.6785	0.4919		

NOTE: To ensure overall protection level, only probabilities associated with pre-planned comparisons should be used.

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
10. ANALYSIS OF LIVE 3-WEEK EMBRYOS/VIABLE EMBRYOS\*\*\*\*\*  
10:48 Wednesday, June 24, 1998

## General Linear Models Procedure

Tukey's Studentized Range (HSD) Test for variable: RESPONSE

NOTE: This test controls the type I experimentwise error rate.

Alpha= 0.05 Confidence= 0.95 df= 57 MSE= 21.6471  
Critical Value of Studentized Range= 3.743

Comparisons significant at the 0.05 level are indicated by \*\*\*\*.

LEVEL Comparison	Simultaneous		
	Lower Confidence Limit	Difference Between Means	Upper Confidence Limit
TRT3 - CONTROL	-4.321	0.175	4.671
TRT3 - TRT1	-3.788	0.708	5.204
TRT3 - TRT2	-3.268	1.157	5.582
CONTROL - TRT3	-4.671	-0.175	4.321
CONTROL - TRT1	-3.964	0.532	5.029
CONTROL - TRT2	-3.444	0.981	5.407
TRT1 - TRT3	-5.204	-0.708	3.788
TRT1 - CONTROL	-5.029	-0.532	3.964
TRT1 - TRT2	-3.976	0.449	4.874
TRT2 - TRT3	-5.582	-1.157	3.268
TRT2 - CONTROL	-5.407	-0.981	3.444
TRT2 - TRT1	-4.874	-0.449	3.976

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
10. ANALYSIS OF LIVE 3-WEEK EMBRYOS/VIABLE EMBRYOS\*\*\*\*\*  
10:48 Wednesday, June 24, 1998

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## General Linear Models Procedure

## Dunnett's One-tailed T tests for variable: RESPONSE

NOTE: This tests controls the type I experimentwise error for comparisons of all treatments against a control.

Alpha= 0.05 Confidence= 0.95 df= 57 MSE= 21.6471  
Critical Value of Dunnett's T= 2.105

Comparisons significant at the 0.05 level are indicated by \*\*\*\*.

LEVEL Comparison	Simultaneous Lower Confidence Limit		Simultaneous Difference Between Means		Simultaneous Upper Confidence Limit
	TRT3 - CONTROL	-3.401	0.175	3.751	
TRT1 - CONTROL	-4.108	-0.532	3.044		
TRT2 - CONTROL	-4.501	-0.981	2.538		

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
11. ANALYSIS OF NORMAL HATCHLINGS/3-WEEK LIVE EMBRYOS

\*\*\*\*\*  
10:48 Wednesday, June 24, 1998General Linear Models Procedure  
Class Level Information

Class	Levels	Values
LEVEL	4	CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 64

NOTE: Due to missing values, only 61 observations can be used in this analysis.

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
11. ANALYSIS OF NORMAL HATCHLINGS/3-WEEK LIVE EMBRYOS

\*\*\*\*\*  
10:48 Wednesday, June 24, 1998General Linear Models Procedure  
Type I Estimable Functions for: LEVEL

Effect Coefficients

INTERCEPT 0

LEVEL	CONTROL	L2
TRT1	L3	
TRT2	L4	
TRT3	-L2-L3-L4	

PROHEXADIONE-CALCIUM: REPRD. STUDY WITH THE BOBWHITE  
11. ANALYSIS OF NORMAL HATCHLINGS/3-WEEK LIVE EMBRYOS

\*\*\*\*\*  
10:48 Wednesday, June 24, 1998

## General Linear Models Procedure

Dependent Variable: RESPONSE

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F

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Model 3 636.55098 212.18366 1.66 0.1869

Error 57 7306.88225 128.19092

Corrected Total 60 7943.43323

R-Square 0.080135 C.V. 17.83863 Root MSE 11.322 RESPONSE Mean 63.470

Source DF Type I SS Mean Square F Value Pr &gt; F

LEVEL 3 636.55098 212.18366 1.66 0.1869

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
11. ANALYSIS OF NORMAL HATCHLINGS/3-WEEK LIVE EMBRYOS

\*\*\*\*\*  
10:48 Wednesday, June 24, 1998General Linear Models Procedure  
Least Squares Means

LEVEL	RESPONSE LSMEAN	Pr >  T  i/j	HD: LSMEAN(i)=LSMEAN(j)		
			1	2	3
CONTROL	62.4708408	1	0.5858	0.9812	0.1254
TRT1	60.2052516	2	0.5858	0.5960	0.0399
TRT2	62.3746508	3	0.9812	0.5960	0.1143
TRT3	68.9013953	4	0.1254	0.0399	0.1143

NOTE: To ensure overall protection level, only probabilities associated with pre-planned comparisons should be used.

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
11. ANALYSIS OF NORMAL HATCHLINGS/3-WEEK LIVE EMBRYOS

\*\*\*\*\*  
10:48 Wednesday, June 24, 1998

## General Linear Models Procedure

## Tukey's Studentized Range (HSD) Test for variable: RESPONSE

NOTE: This test controls the type I experimentwise error rate.

Alpha= 0.05 Confidence= 0.95 df= 57 MSE= 128.1909  
Critical Value of Studentized Range= 3.743

Comparisons significant at the 0.05 level are indicated by \*\*\*\*.

LEVEL Comparison	Simultaneous Lower Confidence Limit		Simultaneous Difference Between Means		Simultaneous Upper Confidence Limit
	TRT3 - CONTROL	-4.511	TRT3 - TRT2	-4.242	TRT3 - TRT1
TRT3 - TRT2	-4.242	6.527	TRT3 - TRT1	-2.245	8.696
TRT3 - TRT1	-2.245	8.696	CONTROL - TRT3	-17.372	17.372
CONTROL - TRT3	-17.372	-6.431	CONTROL - TRT2	-10.673	4.511
CONTROL - TRT2	-10.673	0.096	CONTROL - TRT1	-8.676	10.865
CONTROL - TRT1	-8.676	2.266	TRT2 - TRT3	-17.296	13.207
TRT2 - TRT3	-17.296	-6.527	TRT2 - CONTROL	-10.865	4.242
TRT2 - CONTROL	-10.865	-0.096			10.673

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TRT2	- TRT1	-8.600	2.169	12.938
TRT1	- TRT3	-19.637	-8.696	2.245
TRT1	- CONTRDL	-13.207	-2.266	8.676

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
11. ANALYSIS OF NORMAL HATCHLINGS/3-WEEK LIVE EMBRYOS\*\*\*\*\*  
10:48 Wednesday, June 24, 1998

## General Linear Models Procedure

## Dunnett's One-tailed T tests for variable: RESPONSE

NOTE: This tests controls the type I experimentwise error for comparisons of all treatments against a control.

Alpha= 0.05 Confidence= 0.95 df= 57 MSE= 128.1909  
Critical Value of Dunnett's T= 2.105

Comparisons significant at the 0.05 level are indicated by \*\*\*\*.

LEVEL Comparison	Simultaneous Lower Confidence Limit		Simultaneous Upper Confidence Limit	
	Difference Between Means			
TRT3 - CONTROL	-2.271	6.431	15.133	
TRT2 - CONTROL	-8.661	-0.096	8.469	
TRT1 - CONTROL	-10.968	-2.266	6.436	

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
12. ANALYSIS OF NORMAL HATCHLINGS/EGGS LAID\*\*\*\*\*  
10:48 Wednesday, June 24, 1998General Linear Models Procedure  
Class Level Information

Class	Levels	Values
LEVEL	4	CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 64

NOTE: Due to missing values, only 63 observations can be used in this analysis.

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
12. ANALYSIS OF NORMAL HATCHLINGS/EGGS LAID\*\*\*\*\*  
10:48 Wednesday, June 24, 1998General Linear Models Procedure  
Type I Estimable Functions for: LEVEL

Effect Coefficients

INTERCEPT	0
LEVEL .	CONTROL L2
	TRT1 L3
	TRT2 L4
	TRT3 -L2-L3-L4

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## PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE

## 12. ANALYSIS OF NORMAL HATCHLINGS/EGGS LAID

\*\*\*\*\*  
10:48 Wednesday, June 24, 1998

## General Linear Models Procedure

Dependent Variable: RESPONSE

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	542.71839	180.90613	0.86	0.4669
Error	59	12409.61658	210.33248		
Corrected Total	62	12952.33497			
	R-Square	C.V.	Root MSE	RESPONSE Mean	
	0.041901	29.03951	14.503	49.942	

Source	DF	Type I SS	Mean Square	F Value	Pr > F
LEVEL	3	542.71839	180.90613	0.86	0.4669

## PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE

## 12. ANALYSIS OF NORMAL HATCHLINGS/EGGS LAID

\*\*\*\*\*  
10:48 Wednesday, June 24, 1998General Linear Models Procedure  
Least Squares Means

LEVEL	RESPONSE LSMEAN	Pr >  T  i/j	H0: LSMEAN(i)=LSMEAN(j) 1 2 3 4
CONTROL	49.2890079	1 .	0.8385 0.7276 0.2723
TRT1	48.2392297	2 0.8385	. 0.8850 0.1954
TRT2	47.4942417	3 0.7276	0.8850 . 0.1517
TRT3	55.0647653	4 0.2723	0.1954 0.1517 .

NOTE: To ensure overall protection level, only probabilities associated with pre-planned comparisons should be used.

## PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE

## 12. ANALYSIS OF NORMAL HATCHLINGS/EGGS LAID

\*\*\*\*\*  
10:48 Wednesday, June 24, 1998

## General Linear Models Procedure

## Tukey's Studentized Range (HSD) Test for variable: RESPONSE

NOTE: This test controls the type I experimentwise error rate.

Alpha= 0.05 Confidence= 0.95 df= 59 MSE= 210.3325  
Critical Value of Studentized Ranges= 3.739

Comparisons significant at the 0.05 level are indicated by \*\*\*\*.

LEVEL Comparison	Simultaneous Lower Confidence Limit		Simultaneous Upper Confidence Limit	
	Difference Between Means			
CONTROL - L2	-10.968	-2.266	6.436	
TRT1 - L2	-8.661	-0.096	8.469	
TRT2 - L2	-2.271	6.431	15.133	
TRT3 - L2	48.2392297	0.8385	. 0.8850	0.1954

TRT3	- CONTROL	-8.004	5.776	19.556
TRT3	- TRT1	-6.955	6.826	20.606
TRT3	- TRT2	-6.210	7.571	21.351
CONTROL	- TRT3	-19.556	-5.776	8.004
CONTROL	- TRT1	-12.506	1.050	14.606
CONTROL	- TRT2	-11.761	1.795	15.351
TRT1	- TRT3	-20.606	-6.826	6.955
TRT1	- CONTROL	-14.606	-1.050	12.506
TRT1	- TRT2	-12.811	0.745	14.301
TRT2	- TRT3	-21.351	-7.571	6.210
TRT2	- CONTROL	-15.351	-1.795	11.761
TRT2	- TRT1	-14.301	-0.745	12.811

PROHEXADIONE-CALCIUM: REPRD. STUDY WITH THE BOBWHITE  
12. ANALYSIS OF NORMAL HATCHLINGS/EGGS LAID

\*\*\*\*\*  
10:48 Wednesday, June 24, 1998

#### General Linear Models Procedure

##### Dunnett's One-tailed T tests for variable: RESPONSE

NOTE: This tests controls the type I experimentwise error for comparisons of all treatments against a control.

Alpha= 0.05 Confidence= 0.95 df= 59 MSE= 210.3325  
Critical Value of Dunnett's T= 2.106

Comparisons significant at the 0.05 level are indicated by '\*\*\*'.

LEVEL Comparison	Simultaneous Lower Confidence Limit		Simultaneous Upper Confidence Limit	
	Difference Between Means			
TRT3 - CONTROL	-5.201	5.776	16.753	
TRT1 - CONTROL	-11.848	-1.050	9.749	
TRT2 - CONTROL	-12.593	-1.795	9.004	

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
13. ANALYSIS OF 14-DAY HATCHLING SURVIVORS/NORMAL HATCHLINGS

\*\*\*\*\*  
10:48 Wednesday, June 24, 1998

#### General Linear Models Procedure

##### Class Level Information

Class	Levels	Values
LEVEL	4	CDNTROL TRT1 TRT2 TRT3

Number of observations in data set = 64

NOTE: Due to missing values, only 61 observations can be used in this analysis.

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
13. ANALYSIS OF 14-DAY HATCHLING SURVIVORS/NORMAL HATCHLINGS

\*\*\*\*\*  
10:48 Wednesday, June 24, 1998

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General Linear Models Procedure  
Type I Estimable Functions for: LEVEL

Effect	Coefficients
INTERCEPT	0
LEVEL	CONTROL L2 TRT1 L3 TRT2 L4 TRT3 -L2-L3-L4

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
13. ANALYSIS OF 14-DAY HATCHLING SURVIVORS/NORMAL HATCHLINGS

\*\*\*\*\*  
10:48 Wednesday, June 24, 1998

#### General Linear Models Procedure

##### Dependent Variable: RESPONSE

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	103.88035	34.62678	0.16	0.9230
Error	57	12358.18974	216.81035		
Corrected Total	60	12462.07009			
		R-Square	C.V.	Root MSE	RESPONSE Mean
		0.008336	21.12861	14.724	69.690

Source	DF	Type I SS	Mean Square	F Value	Pr > F
LEVEL	3	103.88035	34.62678	0.16	0.9230

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
13. ANALYSIS DF 14-DAY HATCHLING SURVIVORS/NORMAL HATCHLINGS

\*\*\*\*\*  
10:48 Wednesday, June 24, 1998

#### General Linear Models Procedure Least Squares Means

LEVEL	RESPONSE LSMEAN	Pr >  T  i/j	H0: LSMEAN(i)=LSMEAN(j) 1 2 3 4
CONTROL	68.9043635	1	0.6043 0.8482 0.8979
TRT1	71.7059987	2	0.6043 0.7373 0.5183
TRT2	69.9219272	3	0.8482 0.7373 0.7477
TRT3	68.2113163	4	0.8979 0.5183 0.7477

NOTE: To ensure overall protection level, only probabilities associated with pre-planned comparisons should be used.

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
13. ANALYSIS OF 14-DAY HATCHLING SURVIVORS/NORMAL HATCHLINGS

\*\*\*\*\*  
10:48 Wednesday, June 24, 1998

#### General Linear Models Procedure

##### Tukey's Studentized Range (HSD) Test for variable: RESPONSE

NOTE: This test controls the type I experimentwise error rate.

Alpha= 0.05 Confidence= 0.95 df= 57 MSE= 216.8103  
 Critical Value of Studentized Range= 3.743

Comparisons significant at the 0.05 level are indicated by \*\*\*\*.

LEVEL Comparison	Simultaneous Lower Confidence Limit		Difference Between Means	Simultaneous Upper Confidence Limit	
	TRT1 - TRT2	-12.221	1.784	15.789	
TRT1 - CONTROL	-11.427	2.802	17.031		
TRT1 - TRT3	-10.734	3.495	17.724		
TRT2 - TRT1	-15.789	-1.784	12.221		
TRT2 - CONTROL	-12.987	1.018	15.023		
TRT2 - TRT3	-12.294	1.711	15.716		
CONTROL - TRT1	-17.031	-2.802	11.427		
CONTROL - TRT2	-15.023	-1.018	12.987		
CONTROL - TRT3	-13.536	0.693	14.922		
TRT3 - TRT1	-17.724	-3.495	10.734		
TRT3 - TRT2	-15.716	-1.711	12.294		
TRT3 - CONTROL	-14.922	-0.693	13.536		

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
13. ANALYSIS OF 14-DAY HATCHLING SURVIVORS/NORMAL HATCHLINGS\*\*\*\*\*  
10:48 Wednesday, June 24, 1998

## General Linear Models Procedure

## Dunnett's One-tailed T tests for variable: RESPONSE

NOTE: This test controls the type I experimentwise error for comparisons of all treatments against a control.

Alpha= 0.05 Confidence= 0.95 df= 57 MSE= 216.8103  
 Critical Value of Dunnett's T= 2.105

Comparisons significant at the 0.05 level are indicated by \*\*\*\*.

LEVEL Comparison	Simultaneous Lower Confidence Limit		Difference Between Means	Simultaneous Upper Confidence Limit	
	TRT1 - CONTROL	-8.515	2.802	14.119	
TRT2 - CONTROL	-10.121	1.018	12.156		
TRT3 - CONTROL	-12.010	-0.693	10.624		

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
14. ANALYSIS OF EGGS NOT CRACKED/EGGS LAID\*\*\*\*\*  
10:48 Wednesday, June 24, 1998General Linear Models Procedure  
Class Level Information

Class	Levels	Values
LEVEL	4	CONTROL TRT1 TRT2 TRT3

NOTE: Due to missing values, only 63 observations can be used in this analysis.

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
14. ANALYSIS OF EGGS NOT CRACKED/EGGS LAID\*\*\*\*\*  
10:48 Wednesday, June 24, 1998General Linear Models Procedure  
Type I Estimable Functions for: LEVEL

Effect	Coefficients
INTERCEPT	0
LEVEL	CONTROL L2
	TRT1 L3
	TRT2 L4
	TRT3 -L2-L3-L4

## PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE

14. ANALYSIS OF EGGS NOT CRACKED/EGGS LAID

\*\*\*\*\*  
10:48 Wednesday, June 24, 1998

## General Linear Models Procedure

## Dependent Variable: RESPONSE

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	6.9325968	2.3108656	0.05	0.9845
Error	59	2661.445970	45.1092537		
Corrected Total	62	2668.378567			
	R-Square	C.V.	Root MSE	RESPONSE Mean	
	0.002598	8.075934	6.7163	83.165	

Source	DF	Type I SS	Mean Square	F Value	Pr > F
LEVEL	3	6.9325968	2.3108656	0.05	0.9845

## PROHEXADIONE-CALCIUM: REPRD. STUDY WITH THE BOBWHITE

14. ANALYSIS OF EGGS NOT CRACKED/EGGS LAID

\*\*\*\*\*  
10:48 Wednesday, June 24, 1998General Linear Models Procedure  
Least Squares Means

LEVEL	RESPONSE LSMEAN		Pr >  T  i/j			
	i	j	1	2	3	4
CONTROL	82.9786034	1	0.7601	0.9548	0.9507	
TRT1	83.7070301	2	0.7601	0.7174	0.8114	
TRT2	82.8433040	3	0.9548	0.7174		0.9064
TRT3	83.1283574	4	0.9507	0.8114	0.9064	.

NOTE: To ensure overall protection level, only probabilities associated with pre-planned comparisons should be used.

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
 14. ANALYSIS OF EGGS NOT CRACKED/EGGS LAID

\*\*\*\*\*  
10:48 Wednesday, June 24, 1998

## General Linear Models Procedure

Tukey's Studentized Range (HSD) Test for variable: RESPONSE

NOTE: This test controls the type I experimentwise error rate.

Alpha= 0.05 Confidence= 0.95 df= 59 MSE= 45.10925  
 Critical Value of Studentized Range= 3.739

Comparisons significant at the 0.05 level are indicated by '\*\*\*'.

LEVEL Comparison		Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
TRT1	- TRT3	-5.8030	0.5787	6.9604
TRT1	- CONTROL	-5.5495	0.7284	7.0063
TRT1	- TRT2	-5.4142	0.8637	7.1416
TRT3	- TRT1	-6.9604	-0.5787	5.8030
TRT3	- CNTROL	-6.2319	0.1498	6.5314
TRT3	- TRT2	-6.0966	0.2851	6.6667
CONTROL	- TRT1	-7.0063	-0.7284	5.5495
CONTROL	- TRT3	-6.5314	-0.1498	6.2319
CONTROLD	- TRT2	-6.1426	0.1353	6.4132
TRT2	- TRT1	-7.1416	-0.8637	5.4142
TRT2	- TRT3	-6.6667	-0.2851	6.0966
TRT2	- CONTROL	-6.4132	-0.1353	6.1426

## PROHEXADIDNE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE

## 14. ANALYSIS OF EGGS NOT CRACKED/EGGS LAID

\*\*\*\*\*

10:48 Wednesday, June 24, 1998

## General Linear Models Procedure

Dunnett's One-tailed T tests for variable: RESPONSE

NOTE: This tests controls the type I experimentwise error for comparisons of all treatments against a control.

Alpha= 0.05 Confidence= 0.95 df= 59 MSE= 45.10925  
 Critical Value of Dunnett's T= 2.106

Comparisons significant at the 0.05 level are indicated by '\*\*\*'.

LEVEL Comparison		Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
TRT1	- CONTROL	-4.2723	0.7284	5.7292
TRT3	- CONTROL	-4.9337	0.1498	5.2332
TRT2	- CONTROL	-5.1361	-0.1353	4.8655

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
 15. ANALYSIS OF NORMAL HATCHLINGS/EGGS SET

\*\*\*\*\*

10:48 Wednesday, June 24, 1998

General Linear Models Procedure  
 Class Level InformationClass Levels Values  
 LEVEL 4 CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 64

NOTE: Due to missing values, only 63 observations can be used in this analysis.

## PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE

## 15. ANALYSIS OF NORMAL HATCHLINGS/EGGS SET

\*\*\*\*\*  
10:48 Wednesday, June 24, 1998General Linear Models Procedure  
 Type I Estimable Functions for: LEVELEffect Coefficients  
 INTERCEPT 0  
 LEVEL CONTROL L2  
 TRT1 L3  
 TRT2 L4  
 TRT3 -L2-L3-L4PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
 15. ANALYSIS OF NORMAL HATCHLINGS/EGGS SET\*\*\*\*\*  
10:48 Wednesday, June 24, 1998

## General Linear Models Procedure

## Dependent Variable: RESPONSE

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	650.69989	216.89996	0.84	0.4783
Error	59	15264.37102	258.71815		
Corrected Total	62	15915.07091			
	R-Square	C.V.	Root MSE	RESPDNSE Mean	
	0.040886	29.91547	16.085	53.767	

Source	DF	Type I SS	Mean Square	F Value	Pr > F
LEVEL	3	650.69989	216.89996	0.84	0.4783

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
 15. ANALYSIS OF NORMAL HATCHLINGS/EGGS SET\*\*\*\*\*  
10:48 Wednesday, June 24, 1998General Linear Models Procedure  
 Least Squares Means

LEVEL	RESPONSE LSMEAN	Pr >  T  i/j	H0: LSMEAN(i)=LSMEAN(j)			
			1	2	3	4
CONTROL	53.5420576	1	0.6822	0.7072	0.3256	
TRT1	51.2022297	2	0.6822	0.9729	0.1679	
TRT2	51.3959610	3	0.7072	0.9729	0.1782	
TRT3	59.2727082	4	0.3256	0.1679	0.1782	

NOTE: To ensure overall protection level, only probabilities associated with pre-planned comparisons should be used.

#### PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE 15. ANALYSIS OF NORMAL HATCHLINGS/EGGS SET

\*\*\*\*\*  
10:48 Wednesday, June 24, 1998

#### General Linear Models Procedure

#### Tukey's Studentized Range (HSD) Test for variable: RESPONSE

NOTE: This test controls the type I experimentwise error rate.

Alpha= 0.05 Confidence= 0.95 df= 59 MSE= 258.7182  
Critical Value of Studentized Range= 3.739

Comparisons significant at the 0.05 level are indicated by \*\*\*\*\*.

LEVEL Comparison	Simultaneous Lower Confidence Limit		Simultaneous Difference Between Means		Upper Confidence Limit
	TRT3 - CONTROL	-9.553	TRT3 - TRT2	-7.407	TRT3 - TRT1
CONTROL - TRT3	-21.014	-5.731	9.553		
CONTROL - TRT2	-12.889	2.146	17.181		
CONTROL - TRT1	-12.695	2.340	17.375		
TRT2 - TRT3	-23.160	-7.877	7.407		
TRT2 - CONTROL	-17.181	-2.146	12.889		
TRT2 - TRT1	-14.841	0.194	15.228		
TRT1 - TRT3	-23.354	-8.070	7.213		
TRT1 - CONTROL	-17.375	-2.340	12.695		
TRT1 - TRT2	-15.228	-0.194	14.841		

#### PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE 15. ANALYSIS OF NORMAL HATCHLINGS/EGGS SET

\*\*\*\*\*  
10:48 Wednesday, June 24, 1998

#### General Linear Models Procedure

#### Dunnett's One-tailed T tests for variable: RESPONSE

NOTE: This test controls the type I experimentwise error for comparisons of all treatments against a control.

Alpha= 0.05 Confidence= 0.95 df= 59 MSE= 258.7182  
Critical Value of Dunnett's T= 2.106

Comparisons significant at the 0.05 level are indicated by \*\*\*\*\*.

Simultaneous Simultaneous

LEVEL Comparison	Lower Confidence Limit	Difference Between Means	Upper Confidence Limit
TRT3 - CONTROL	-6.443	5.731	17.905
TRT2 - CONTROL	-14.122	-2.146	9.830
TRT1 - CONTROL	-14.316	-2.340	9.636

#### PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE 16. ANALYSIS OF 14-DAY HATCHLING SURVIVORS/EGGS SET

\*\*\*\*\*  
10:48 Wednesday, June 24, 1998

#### General Linear Models Procedure Class Level Information

Class	Levels	Values
LEVEL	4	CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 64

NOTE: Due to missing values, only 63 observations can be used in this analysis.

#### PROHEXAOIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE 16. ANALYSIS OF 14-DAY HATCHLING SURVIVORS/EGGS SET

\*\*\*\*\*  
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#### General Linear Models Procedure Type I Estimable Functions for: LEVEL

Effect	Coefficients
INTERCEPT	0
LEVEL	CONTROL L2 TRT1 L3 TRT2 L4 TRT3 -L2-L3-L4

#### PROHEXADIONE-CALCIUM: REPRD. STUDY WITH THE BOBWHITE 16. ANALYSIS OF 14-DAY HATCHLING SURVIVORS/EGGS SET

\*\*\*\*\*  
10:48 Wednesday, June 24, 1998

#### General Linear Models Procedure

#### Dependent Variable: RESPONSE

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	457.81380	152.60460	0.54	0.6583
Error	59	16743.73564	283.79213		
Corrected Total	62	17201.54944			
	R-Square	C.V.	Root MSE	RESPONSE Mean	
	0.026615	35.32609	16.846	47.687	

Source	DF	Type I SS	Mean Square	F Value	Pr > F
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LEVEL 3 457.81380 152.60460 0.54 0.6583

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
16. ANALYSIS OF 14-DAY HATCHLING SURVIVORS/EGGS SET

\*\*\*\*\*  
10:48 Wednesday, June 24, 1998

General Linear Models Procedure  
Least Squares Means

LEVEL	RESPONSE	Pr >  T	HO: LSMEAN(i)=LSMEAN(j)	LSMEAN			
				i/j	1	2	3
CONTROL	47.6959554	1	0.9482	0.5564	0.4970		
TRT1	47.3070534	2	0.9482	.	0.6007	0.4577	
TRT2	44.1726703	3	0.5564	0.6007	.	0.2107	
TRT3	51.8334408	4	0.4970	0.4577	0.2107	.	

NOTE: To ensure overall protection level, only probabilities associated with pre-planned comparisons should be used.

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
16. ANALYSIS OF 14-DAY HATCHLING SURVIVORS/EGGS SET

\*\*\*\*\*  
10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Tukey's Studentized Range (HSD) Test for variable: RESPONSE

NOTE: This test controls the type I experimentwise error rate.

Alpha= 0.05 Confidence= 0.95 df= 59 MSE= 283.7921  
Critical Value of Studentized Range= 3.739

Comparisons significant at the 0.05 level are indicated by \*\*\*\*.

LEVEL Comparison	Simultaneous Lower Confidence Limit		Simultaneous Difference Between Means		Simultaneous Upper Confidence Limit	
	TRT3 - CONTROL	-11.869	TRT3 - TRT1	-11.480	TRT3 - TRT2	-8.346
CONTROL - TRT3	-20.144	-4.137	11.869			
CONTROL - TRT1	-15.358	0.389	16.135			
CONTROL - TRT2	-12.223	3.523	19.270			
TRT1 - TRT3	-20.533	-4.526	11.480			
TRT1 - CONTROL	-16.135	-0.389	15.358			
TRT1 - TRT2	-12.612	3.134	18.881			
TRT2 - TRT3	-23.668	-7.661	8.346			
TRT2 - CONTROL	-19.270	-3.523	12.223			
TRT2 - TRT1	-18.881	-3.134	12.612			

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
16. ANALYSIS OF 14-DAY HATCHLING SURVIVORS/EGGS SET

\*\*\*\*\*  
10:48 Wednesday, June 24, 1998

General Linear Models Procedure

File:44457727.sas Page 40  
Dunnett's One-tailed T tests for variable: RESPONSE

NOTE: This tests controls the type I experimentwise error for comparisons of all treatments against a control.

Alpha= 0.05 Confidence= 0.95 df= 59 MSE= 283.7921  
Critical Value of Dunnett's T= 2.106

Comparisons significant at the 0.05 level are indicated by \*\*\*\*.

LEVEL Comparison	Lower Confidence Limit	Simultaneous Difference Between Means		Upper Confidence Limit
		TRT3 - CONTROL	TRT1 - CONTROL	
TRT3 - CONTROL	-8.613	4.137	16.888	
TRT1 - CONTROL	-12.932	-0.389	12.154	
TRT2 - CONTROL	-16.066	-3.523	9.020	

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
17. ANALYSIS OF EGGSHELL THICKNESS

\*\*\*\*\*  
10:48 Wednesday, June 24, 1998

General Linear Models Procedure  
Class Level Information

Class	Levels	Values
LEVEL	4	CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 64

NOTE: Due to missing values, only 58 observations can be used in this analysis.

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
17. ANALYSIS OF EGGSHELL THICKNESS

\*\*\*\*\*  
10:48 Wednesday, June 24, 1998

General Linear Models Procedure  
Type I Estimable Functions for: LEVEL

Effect	Coefficients
INTERCEPT	0
LEVEL	CONTROL L2
	TRT1 L3
	TRT2 L4
	TRT3 -L2-L3-L4

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
17. ANALYSIS OF EGGSHELL THICKNESS

\*\*\*\*\*  
10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Dependent Variable: THICK

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	0.0006093	0.0002031	2.06	0.1168

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Error 54 0.0053331 D.0000988

Corrected Total 57 D.0059423

	R-Square	C.V.	Root MSE	THICK Mean
	0.102532	4.980076	0.0099	0.1996
Source	DF	Type I SS	Mean Square	F Value
LEVEL	3	0.0006093	0.0002031	2.06
				Pr > F
				0.1168

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
17. ANALYSIS OF EGGSHELL THICKNESS  
\*\*\*\*\*

10:48 Wednesday, June 24, 1998

General Linear Models Procedure  
Least Squares Means

LEVEL	THICK	Pr >  T	HO: LSMEAN(i)=LSMEAN(j)				
			LSMEAN	i/j	1	2	3
CONTROL	0.19584615	1	0.2293	0.0311	0.7471		
TRT1	0.20050000	2	0.2293	.	0.3317	0.3567	
TRT2	0.20406250	3	0.0311	0.3317	.	0.0553	
TRT3	0.19706667	4	0.7471	0.3567	0.0553	.	

NOTE: To ensure overall protection level, only probabilities associated with pre-planned comparisons should be used.

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
17. ANALYSIS OF EGGSHELL THICKNESS  
\*\*\*\*\*

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Tukey's Studentized Range (HSD) Test for variable: THICK

NOTE: This test controls the type I experimentwise error rate.

Alpha= 0.05 Confidence= 0.95 df= 54 MSE= 0.000099  
Critical Value of Studentized Range= 3.749

Comparisons significant at the 0.05 level are indicated by \*\*\*\*.

LEVEL Comparison	Simultaneous		Simultaneous	
	Lower Confidence Limit	Difference Between Means	Upper Confidence Limit	
TRT2 - TRT1	-0.006078	0.003562	0.013203	
TRT2 - TRT3	-0.002472	0.006996	0.016464	
TRT2 - CONTROL	-0.001620	0.008216	0.018053	
TRT1 - TRT2	-0.013203	-0.003562	0.006078	
TRT1 - TRT3	-0.006356	0.003433	0.013223	
TRT1 - CDTROL	-0.005493	0.004654	0.014800	
TRT3 - TRT2	-0.016464	-0.006996	0.002472	
TRT3 - TRT1	-0.013223	-0.003433	0.006356	
TRT3 - CONTROL	-0.008762	0.001221	0.011203	
CONTROL - TRT2	-0.018053	-0.008216	0.001620	

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CONTROL - TRT1 -0.014800 -0.004654 0.005493  
CDTRL - TRT3 -0.011203 -0.001221 0.008762

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PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
17. ANALYSIS OF EGGSHELL THICKNESS  
\*\*\*\*\*

10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Dunnett's One-tailed T tests for variable: THICK

NOTE: This tests controls the type I experimentwise error for comparisons of all treatments against a control.

Alpha= 0.05 Confidence= 0.95 df= 54 MSE= 0.000099  
Critical Value of Dunnett's T= 2.100

Comparisons significant at the 0.05 level are indicated by \*\*\*\*.

LEVEL Comparison	Simultaneous		Simultaneous	
	Lower Confidence Limit	Difference Between Means	Upper Confidence Limit	
TRT2 - CONTROL	0.000425	0.008216	0.016007	
TRT1 - CONTROL	-0.003383	0.004654	0.012690	
TRT3 - CDTROL	-0.006686	0.001221	0.009127	

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
18. ANALYSIS OF HATCHLING WEIGHT  
\*\*\*\*\*

10:48 Wednesday, June 24, 1998

General Linear Models Procedure  
Class Level Information

Class	Levels	Values
LEVEL	4	CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 64

NOTE: Due to missing values, only 61 observations can be used in this analysis.

PROHEXADIDNE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
18. ANALYSIS OF HATCHLING WEIGHT  
\*\*\*\*\*

10:48 Wednesday, June 24, 1998

General Linear Models Procedure  
Type I Estimable Functions for: LEVEL

Effect	Coefficients		
INTERCEPT	0		
LEVEL	CONTROL	L2	
	TRT1	L3	
	TRT2	L4	
	TRT3	-L2-L3-L4	

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
18. ANALYSIS OF HATCHLING WEIGHT

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\*\*\*\*\*  
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#### General Linear Models Procedure

Dependent Variable: HATWT

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	0.6046116	0.2015372	1.00	0.3989
Error	57	11.4708671	0.2012433		
Corrected Total	60	12.0754787			

R-Square	C.V.	Root MSE	HATWT Mean
0.050069	6.979186	0.4486	6.4277

Source	DF	Type I SS	Mean Square	F Value	Pr > F
LEVEL	3	0.6046116	0.2015372	1.00	0.3989

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
18. ANALYSIS OF HATCHLING WEIGHT  
\*\*\*\*\*

10:48 Wednesday, June 24, 1998

#### General Linear Models Procedure Least Squares Means

LEVEL	HATWT LSMEAN	Pr >  T  i/j	HO: LSMEAN(i)=LSMEAN(j)			
			1	2	3	4
CONTROL	6.33200000	1	0.4668	0.9146	0.1315	
TRT1	6.45200000	2	0.4668	0.5270	0.4284	
TRT2	6.34937500	3	0.9146	0.5270	0.1534	
TRT3	6.58266667	4	0.1315	0.4284	0.1534	

NOTE: To ensure overall protection level, only probabilities associated with pre-planned comparisons should be used.

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
18. ANALYSIS OF HATCHLING WEIGHT  
\*\*\*\*\*

10:48 Wednesday, June 24, 1998

#### General Linear Models Procedure

Tukey's Studentized Range (HSD) Test for variable: HATWT

NOTE: This test controls the type I experimentwise error rate.

Alpha= 0.05 Confidence= 0.95 df= 57 MSE= 0.201243  
Critical Value of Studentized Range= 3.743

Comparisons significant at the 0.05 level are indicated by \*\*\*\*.

LEVEL Comparison	Simultaneous Lower Confidence Limit		Simultaneous Difference Between Means		Simultaneous Upper Confidence Limit			
	TRT3 - TRT1	-0.3028	TRT3 - TRT2	-0.1934	TRT1 - TRT2	0.2353	TRT1 - TRT3	0.5642
TRT3 - TRT1	-0.3028	0.1307	0.5642					
TRT3 - TRT2	-0.1934	0.2353	0.6600					

File:44457727.sas Page 44	TRT3 - CONTROL	-0.1828	0.2507	0.6842
TRT1 - TRT3	-0.5642	-0.1307	0.3028	
TRT1 - TRT2	-0.3241	0.1026	0.5293	
TRT1 - CONTROL	-0.3135	0.1200	0.5535	
TRT2 - TRT3	-0.6600	-0.2333	0.1934	
TRT2 - TRT1	-0.5293	-0.1026	0.3241	
TRT2 - CONTROL	-0.4093	0.0174	0.4441	
CONTROL - TRT3	-0.6842	-0.2507	0.1828	
CONTROL - TRT1	-0.5535	-0.1200	0.3135	
CONTROL - TRT2	-0.4441	-0.0174	0.4093	

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
18. ANALYSIS OF HATCHLING WEIGHT  
\*\*\*\*\*

10:48 Wednesday, June 24, 1998

#### General Linear Models Procedure

Dunnett's One-tailed T tests for variable: HATWT

NOTE: This tests controls the type I experimentwise error for comparisons of all treatments against a control.

Alpha= 0.05 Confidence= 0.95 df= 57 MSE= 0.201243  
Critical Value of Dunnett's T= 2.105

Comparisons significant at the 0.05 level are indicated by \*\*\*\*.

LEVEL Comparison	Simultaneous Lower Confidence Limit		Simultaneous Difference Between Means		Simultaneous Upper Confidence Limit	
	TRT3 - CONTROL	-0.0941	TRT1 - CONTROL	-0.2248	TRT2 - CONTROL	-0.3220
TRT1 - CONTROL	-0.2248	0.1200	0.4648			
TRT2 - CONTROL	-0.3220	0.0174	0.3567			

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
19. ANALYSIS OF 14-DAY SURVIVOR WEIGHT  
\*\*\*\*\*

10:48 Wednesday, June 24, 1998

#### General Linear Models Procedure Class Level Information

Class	Levels	Values
LEVEL	4	CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 64

NOTE: Due to missing values, only 60 observations can be used in this analysis.

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
19. ANALYSIS OF 14-DAY SURVIVOR WEIGHT  
\*\*\*\*\*

10:48 Wednesday, June 24, 1998

#### General Linear Models Procedure Type I Estimable Functions for: LEVEL

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Effect Coefficients

INTERCEPT	D
LEVEL	CONTROL L2
	TRT1 L3
	TRT2 L4
	TRT3 -L2-L3-L4

PROHEXAONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
19. ANALYSIS OF 14-DAY SURVIVOR WEIGHT

\*\*\*\*\*  
10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Dependent Variable: SURVWT

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	3	14.926667	4.975556	0.62	0.6074
Error	56	452.157333	8.074238		
Corrected Total	59	467.084000			
	R-Square	C.V.	Root MSE	SURVWT Mean	
	0.031957	11.56971	2.8415	24.560	

Source	DF	Type I SS	Mean Square	F Value	Pr > F
LEVEL	3	14.926667	4.975556	0.62	0.6074

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
19. ANALYSIS OF 14-DAY SURVIVOR WEIGHT

\*\*\*\*\*  
10:48 Wednesday, June 24, 1998

General Linear Models Procedure  
Least Squares Means

LEVEL	SURVWT LSMEAN	Pr >  T  i/j	H0: LSMEAN(i)=LSMEAN(j)			
			1	2	3	4
CONTROL	23.973333	1	0.1889	0.6500	0.6363	
TRT1	25.353333	2	0.1889	0.3859	0.3964	
TRT2	24.446667	3	0.6500	0.3859	0.9847	
TRT3	24.466667	4	0.6363	0.3964	0.9847	

NOTE: To ensure overall protection level, only probabilities associated with pre-planned comparisons should be used.

PROHEXADIONE-CALCIUM: REPRD. STUDY WITH THE BOBWHITE  
19. ANALYSIS OF 14-DAY SURVIVOR WEIGHT

\*\*\*\*\*  
10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Tukey's Studentized Range (HSD) Test for variable: SURVWT

NOTE: This test controls the type I experimentwise error rate.

Alpha= 0.05 Confidence= 0.95 df= 56 MSE= 8.074238

File:44457727.sas Page 46  
Critical Value of Studentized Range= 3.745  
Minimum Significant Difference= 2.7474

Comparisons significant at the 0.05 level are indicated by \*\*\*\*.

LEVEL Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
TRT1 - TRT3	-1.861	0.887	3.634
TRT1 - TRT2	-1.841	0.907	3.654
TRT1 - CONTROL	-1.367	1.380	4.127
TRT3 - TRT1	-3.634	-0.887	1.861
TRT3 - TRT2	-2.727	0.020	2.767
TRT3 - CONTROL	-2.254	0.493	3.241
TRT2 - TRT1	-3.654	-0.907	1.841
TRT2 - TRT3	-2.767	-0.020	2.727
TRT2 - CONTROL	-2.274	0.473	3.221
CONTROL - TRT1	-4.127	-1.380	1.367
CONTROL - TRT3	-3.241	-0.493	2.254
CONTROL - TRT2	-3.221	-0.473	2.274

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
19. ANALYSIS OF 14-DAY SURVIVOR WEIGHT

\*\*\*\*\*  
10:48 Wednesday, June 24, 1998

General Linear Models Procedure

Dunnett's One-tailed T tests for variable: SURVWT

NOTE: This tests controls the type I experimentwise error for comparisons of all treatments against a control.

Alpha= 0.05 Confidence= 0.95 df= 56 MSE= 8.074238  
Critical Value of Dunnett's T= 2.107  
Minimum Significant Difference= 2.1861

Comparisons significant at the 0.05 level are indicated by \*\*\*\*.

LEVEL Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
TRT1 - CONTROL	-0.806	1.380	3.566
TRT3 - CONTROL	-1.693	0.493	2.679
TRT2 - CONTROL	-1.713	0.473	2.659

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
2D. ANALYSIS OF FOOD CONSUMPTION

\*\*\*\*\*  
10:48 Wednesday, June 24, 1998

General Linear Models Procedure  
Class Level Information

Class	Levels	Values
LEVEL	4	CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 64

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
 20. ANALYSIS OF FOOD CONSUMPTION  
 \*\*\*\*

10:48 Wednesday, June 24, 1998

General Linear Models Procedure  
 Type I Estimable Functions for: LEVEL

## Effect Coefficients

INTERCEPT 0

LEVEL	CONTROL	L2
	TRT1	L3
	TRT2	L4
	TRT3	-L2-L3-L4

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
 20. ANALYSIS OF FOOD CONSUMPTION  
 \*\*\*\*

10:48 Wednesday, June 24, 1998

## General Linear Models Procedure

## Dependent Variable: FOOD

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
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Model	3	4.0631250	1.3543750	0.71	0.5524
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Error	60	115.1662500	1.9194375		
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Corrected Total	63	119.2293750			
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R-Square	C.V.	Root MSE	FOOD Mean
0.034078	7.007113	1.3854	19.772

Source	DF	Type I SS	Mean Square	F Value	Pr > F
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LEVEL	3	4.0631250	1.3543750	0.71	0.5524
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PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
 2D. ANALYSIS OF FOOD CONSUMPTION  
 \*\*\*\*

10:48 Wednesday, June 24, 1998

General Linear Models Procedure  
 Least Squares Means

LEVEL	FOOD	Pr >  T	H0: LSMEAN(i)=LSMEAN(j)
	LSMEAN	i/j	1 2 3 4
CONTROL	19.3562500	1	0.1981 0.2302 0.3821
TRT1	19.9937500	2	0.1981 0.9291 0.6752
TRT2	19.9500000	3	0.2302 0.9291 0.7412
TRT3	19.7875000	4	0.3821 0.6752 0.7412

NOTE: To ensure overall protection level, only probabilities associated with pre-planned comparisons should be used.

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
 20. ANALYSIS OF FOOD CONSUMPTION

\*\*\*\*\*

10:48 Wednesday, June 24, 1998

## General Linear Models Procedure

## Tukey's Studentized Range (HSD) Test for variable: FOOD

NOTE: This test controls the type I experimentwise error rate.

Alpha= 0.05 Confidence= 0.95 df= 60 MSE= 1.919438  
 Critical Value of Studentized Range= 3.737  
 Minimum Significant Difference= 1.2944

Comparisons significant at the 0.05 level are indicated by \*\*\*\*.

LEVEL Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
TRT1 - TRT2	-1.2506	0.0437	1.3381
TRT1 - TRT3	-1.0881	0.2062	1.5006
TRT1 - CONTROL	-0.6569	0.6375	1.9319
TRT2 - TRT1	-1.3381	-0.0437	1.2506
TRT2 - TRT3	-1.1319	0.1625	1.4569
TRT2 - CONTROL	-0.7006	0.5938	1.8881
TRT3 - TRT1	-1.5006	-0.2062	1.0881
TRT3 - TRT2	-1.4569	-0.1625	1.1319
TRT3 - CONTROL	-0.8631	0.4313	1.7256
CONTROL - TRT1	-1.9319	-0.6375	0.6569
CONTROL - TRT2	-1.8881	-0.5938	0.7006
CONTROL - TRT3	-1.7256	-0.4313	0.8631

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
 20. ANALYSIS OF FOOD CONSUMPTION  
 \*\*\*\*

10:48 Wednesday, June 24, 1998

## General Linear Models Procedure

## Dunnett's One-tailed T tests for variable: FOOD

NOTE: This tests controls the type I experimentwise error for comparisons of all treatments against a control.

Alpha= 0.05 Confidence= 0.95 df= 60 MSE= 1.919438  
 Critical Value of Dunnett's T= 2.104  
 Minimum Significant Difference= 1.0306

Comparisons significant at the 0.05 level are indicated by \*\*\*\*.

LEVEL Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
TRT1 - CONTROL	-0.3931	0.6375	1.6681
TRT2 - CONTROL	-0.4368	0.5938	1.6243
TRT3 - CONTROL	-0.5993	0.4313	1.4618

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
 21. COVARIATE ANALYSIS OF MALE BODY WEIGHT  
 \*\*\*\*

10:48 Wednesday, June 24, 1998

General Linear Models Procedure  
Class Level Information

Class	Levels	Values
LEVEL	4	CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 64

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
21. COVARIATE ANALYSIS OF MALE BODY WEIGHT

\*\*\*\*\*  
10:48 Wednesday, June 24, 1998

#### General Linear Models Procedure

Dependent Variable: POSTM

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	3412.6171	853.1543	8.14	0.0001
Error	59	6186.5404	104.8566		
Corrected Total	63	9599.1575			
	R-Square	C.V.	Root MSE	POSTM Mean	
	0.355512	5.051310	10.240	202.72	
Source	DF	Type I SS	Mean Square	F Value	Pr > F
LEVEL PREM	3	395.5238	131.8413	1.26	0.2973
	1	3017.0934	3017.0934	28.77	0.0001
Source	DF	Type III SS	Mean Square	F Value	Pr > F
LEVEL PREM	3	370.8781	123.6260	1.18	0.3255
	1	3017.0934	3017.0934	28.77	0.0001

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
21. COVARIATE ANALYSIS OF MALE BODY WEIGHT

\*\*\*\*\*  
10:48 Wednesday, June 24, 1998

#### General Linear Models Procedure Least Squares Means

LEVEL	POSTM LSMEAN	Std Err LSMEAN	Pr >  T  HO:LSMEAN=0	LSMEAN Number
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CONTROL	203.417688	2.566668	0.0001	1
TRT1	205.190809	2.565984	0.0001	2
TRT2	203.536708	2.560876	0.0001	3
TRT3	198.729795	2.561151	0.0001	4

Pr > |T| HO: LSMEAN(i)=LSMEAN(j)

i/j	1	2	3	4
1	0.6278	0.9739	0.2016	.
2	0.6278	0.6502	0.0796	.
3	0.9739	0.6502	0.1897	.
4	0.2016	0.0796	0.1897	.

NOTE: To ensure overall protection level, only probabilities associated with pre-planned comparisons should be used.

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
21. COVARIATE ANALYSIS OF MALE BODY WEIGHT

\*\*\*\*\*  
10:48 Wednesday, June 24, 1998

#### General Linear Models Procedure

Tukey's Studentized Range (HSD) Test for variable: POSTM

NOTE: This test controls the type I experimentwise error rate.

Alpha= 0.05 Confidence= 0.95 df= 59 MSE= 104.8566  
Critical Value of Studentized Range= 3.739  
Minimum Significant Difference= 9.5715

Comparisons significant at the 0.05 level are indicated by \*\*\*\*.

LEVEL Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
TRT1 - TRT2	-6.615	2.956	12.528
TRT1 - CONTROL	-5.865	3.706	13.278
TRT1 - TRT3	-2.584	6.988	16.559
TRT2 - TRT1	-12.528	-2.956	6.615
TRT2 - CONTROL	-8.822	0.750	10.322
TRT2 - TRT3	-5.540	4.031	13.603
CONTROL - TRT1	-13.278	-3.706	5.865
CONTROL - TRT2	-10.322	-0.750	8.822
CONTROL - TRT3	-6.290	3.281	12.853
TRT3 - TRT1	-16.559	-6.988	2.584
TRT3 - TRT2	-13.603	-4.031	5.540
TRT3 - CONTROL	-12.853	-3.281	6.290

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
21. COVARIATE ANALYSIS OF MALE BODY WEIGHT

\*\*\*\*\*  
10:48 Wednesday, June 24, 1998

#### General Linear Models Procedure

Dunnett's One-tailed T tests for variable: POSTM

NOTE: This test controls the type I experimentwise error for comparisons of all treatments against a control.

Alpha= 0.05 Confidence= 0.95 df= 59 MSE= 104.8566  
Critical Value of Dunnett's T= 2.105  
Minimum Significant Difference= 7.6196

Comparisons significant at the 0.05 level are indicated by \*\*\*\*.

LEVEL Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
TRT1 - CONTROL	-3.913	3.706	11.326
TRT2 - CONTROL	-6.870	0.750	8.370

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 TRT3 - CONTROL -10.901 -3.281 4.338

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
 22. COVARIATE ANALYSIS OF FEMALE BODY WEIGHT  
 \*\*\*\*  
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General Linear Models Procedure  
 Class Level Information

Class	Levels	Values
LEVEL	4	CONTROL TRT1 TRT2 TRT3

Number of observations in data set = 64

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
 22. COVARIATE ANALYSIS OF FEMALE BODY WEIGHT  
 \*\*\*\*  
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General Linear Models Procedure

Dependent Variable: POSTF

Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	4	4473.1142	1118.2785	7.74	0.0001
Error	59	8528.4233	144.5495		
Corrected Total	63	13001.5375			

R-Square	C.V.	Root MSE	POSTF Mean
0.344045	5.318827	12.023	226.04

Source	DF	Type I SS	Mean Square	F Value	Pr > F
LEVEL PREF	3	574.0537	191.3512	1.32	0.2752
PREF	1	3899.0604	3899.0604	26.97	0.0001
Source	DF	Type III SS	Mean Square	F Value	Pr > F
LEVEL PREF	3	353.8634	117.9545	0.82	0.4902
PREF	1	3899.0604	3899.0604	26.97	0.0001

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
 22. COVARIATE ANALYSIS OF FEMALE BODY WEIGHT  
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General Linear Models Procedure  
 Least Squares Means

LEVEL	POSTF LSMEAN	Std Err LSMEAN	Pr >  T  H0:LSMEAN=0	LSMEAN Number
CONTROL	226.494816	3.015356	0.0001	1
TRT1	227.882541	3.015806	0.0001	2
TRT2	227.727980	3.007480	0.0001	3
TRT3	222.069663	3.007676	0.0001	4

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 Pr > |T| H0: LSMEAN(i)=LSMEAN(j)

i/j	1	2	3	4
1	0.7468	0.7735	0.3023	
2	0.7468	.	0.9711	0.1781
3	0.7735	0.9711	.	0.1888
4	0.3023	0.1781	0.1888	.

NOTE: To ensure overall protection level, only probabilities associated with pre-planned comparisons should be used.

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
 22. COVARIATE ANALYSIS OF FEMALE BODY WEIGHT  
 \*\*\*\*

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General Linear Models Procedure

Tukey's Studentized Range (HSD) Test for variable: POSTF

NOTE: This test controls the type I experimentwise error rate.

Alpha= 0.05 Confidence= 0.95 df= 59 MSE= 144.5495  
 Critical Value of Studentized Range= 3.739  
 Minimum Significant Difference= 11.238

Comparisons significant at the 0.05 level are indicated by \*\*\*\*.

LEVEL Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
TRT1 - TRT2	-10.338	0.900	12.138
TRT1 - CONTROL	-7.319	3.919	15.157
TRT1 - TRT3	-3.582	7.656	18.894
TRT2 - TRT1	-12.138	-0.900	10.338
TRT2 - CONTROL	-8.219	3.019	14.257
TRT2 - TRT3	-4.482	6.756	17.994
CONTROL - TRT1	-15.157	-3.919	7.319
CONTROL - TRT2	-14.257	-3.019	8.219
CONTROL - TRT3	-7.501	3.738	14.976
TRT3 - TRT1	-18.894	-7.656	3.582
TRT3 - TRT2	-17.994	-6.756	4.482
TRT3 - CONTROL	-14.976	-3.738	7.501

PROHEXADIONE-CALCIUM: REPRO. STUDY WITH THE BOBWHITE  
 22. COVARIATE ANALYSIS OF FEMALE BODY WEIGHT  
 \*\*\*\*

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General Linear Models Procedure

Dunnett's One-tailed T tests for variable: POSTF

NOTE: This test controls the type I experimentwise error for comparisons of all treatments against a control.

Alpha= 0.05 Confidence= 0.95 df= 59 MSE= 144.5495  
 Critical Value of Dunnett's T= 2.105  
 Minimum Significant Difference= 8.9463

Comparisons significant at the 0.05 level are indicated by \*\*\*\*.

LEVEL Comparison	Simultaneous		
	Lower Confidence Limit	Difference Between Means	Upper Confidence Limit
TRT1 - CONTROL	-5.028	3.919	12.865
TRT2 - CONTROL	-5.928	3.019	11.965
TRT3 - CONTROL	-12.684	-3.738	5.209

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